SANTA CLARA VALLEY WATER DISTRICT

WATER UTILITY ENTERPRISE REPORT

FINAL

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A. PREFACE

This is the 29th annual report on the status of the Santa Clara Valley Water District's (District) Water Utility Enterprise. In accordance with Section 26.5 of the District's Act, the District annually prepares a written report on the District's activities on the protection and augmentation of the water supplies of the District. As required by the District Act, this report provides information on the present and future water requirements of Santa Clara County (County), the water supply available to the District, future capital improvement and maintenance and operating requirements, financing methods, and the water charges by zone for agricultural water and nonagricultural water

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I. ADOPTED WATER RATES FOR 2000-2001

INTRODUCTION

The District is the water resource management agency providing a safe and reliable water supply to the County's nearly 1.7 million residents. The District's Water Utility budget and rate strategy for 2000-2001 are designed to provide revenues to pay the full cost of the County's water supply and to address challenges to the quality of the County's drinking water.

The adopted rates described below are necessary for the Water Utility to provide a reliable water supply in the face of two major cost issues:

- The need to continue providing safe, high quality water from the District's three water treatment plants

- Increasing costs of water and the need to renegotiate the District's contract for water from the federal Central Valley Project

Other uncertainties such as combating Methyl Tert-Butyl Ether (MTBE) in County water supplies, costs to implement proposed solutions to Bay-Delta water quality problems and the District's role in providing recycled water to the County will continue to pose operating and financial challenges as the century opens.

Beginning with fiscal year 2000-2001, the Water Utility Enterprise will reduce utilization of property taxes from the District's one-percent allocation as part of its revenue source. The countywide water fund tax that supported water utility activities will be used to support the District's watershed management efforts that were previously funded by both water utility and flood zone revenues. It is anticipated that increased efficiencies resulting from the Board of Directors recent performance assessment will allow this revenue to be reprogrammed with minimal impact on rates or on level of service provided to Water Utility customers.

This section summarizes Water Utility rates adopted for 2000-2001. Details of the rate components and other charges are presented in Appendix A. Section II presents data on the County's water supply and water usage. Section III describes water supply and quality challenges facing the Water Utility and the benefits of District activities to address them. Section IV discusses the revenue required to meet needs in fiscal year 2000-2001 and provides the financial analysis for the two water charge zones. Also included in this last section is a projection of the Water Utility finances over the next 10 years.

ADOPTED WATER RATES FOR 2000-2001

In 1998, the District conducted an extensive analysis of the long-term capital and operating needs of the Water Utility and prepared a 10-year projection of the water rates and revenue bond financing that would be necessary to provide a reliable, high-quality water supply to the County. Alternative rate projections were discussed extensively with the water retailers, and a decision was reached to begin a series of rate increases, expected to lead to rates 50 percent above the 1998 level by 2007.
Table 1-1 shows the water rates in effect for fiscal years 1996-97 through 1999-00 and the adopted

rates for fiscal year 2000-2001.

In 1998-99, the rates for North County, Water Charge Zone W-2, were increased for the first time since July 1991 for municipal and industrial (M&I) water. The South County, Water Charge Zone W-5, M&I rate did not change until 1999-00 (the boundaries of Zones W-2 and W-5 are shown on the Water Utility Zones map in Appendix C). As shown in Table 1-1, the groundwater charge for M&I water in the North County was raised to $285 per acre-foot for the 1999-00 fiscal year. The rates adopted by the Board for fiscal year 2000-01 continue along the path of rate increases projected in 1998 and increase the groundwater charge for M&I water in the North County to $310 per acre-foot.

For South County, the Board continued the groundwater charge for M&I water at the current rate of $115 per acre-foot. In recent years, Board policy has been to set the rates for agricultural water at 10 percent of the M&I rates.

The surcharge on treated water delivered under the contracts with retail agencies is recommended to remain at $70 per acre-foot. The District has the discretion to allow water retailers to purchase treated water in excess of their basic contract amounts, so-called noncontract treated water, when supplies are ample. The amount of the surcharge on noncontract water determines the economics of choosing to pump groundwater rather than purchasing treated water. In July 1998, the Board lowered the noncontract surcharge from $20 per acre-foot to $0 to encourage the use of treated water from the Rinconada Water Treatment Plant. In fiscal year 2000-2001**,** the District will continue the $0 per acre-foot surcharge on noncontract water from the Rinconada Water Treatment Plant. This will continue to advance the District's objective to reduce groundwater use on the west side of the Santa Clara Valley basin where groundwater levels are low compared to other areas of the Santa Clara Valley basin.

TABLE 1-1
Summary of Water Charges
(Dollars Per Acre-Foot)

	1996-97	**1997-98**	**1998-99**	**1999-00**	**Adopted 2000-01**
Zone W-2					
M&I	240.00	240.00	260.00	285.00	310.00
Agricultural	43.75	43.75	26.00	28.50	31.00
Treated Water Surcharge					
Contract	70.00	70.00	70.00	70.00	70.00
Non Contract **(See Note)**	30.00	20.00	0.00	0.00	0.00
Zone W-5					
M&I	108.00	108.00	108.00	115.00	115.00
Agricultural	11.50	11.50	10.80	11.50	11.50

Note: Noncontract water will be available only from the Rinconada Water Treatment Plant in 2000-01 to reduce groundwater pumping on the west side of the Santa Clara Valley Basin. Groundwater levels in other portions of the Basin are adequate.

II. SANTA CLARA COUNTY WATER REQUIREMENTS AND SUPPLIES

LONG-TERM WATER USE TRENDS

Water use in the County is categorized as either agricultural or municipal and industrial (M&I). Recorded fiscal year North County water use since 1964-65 and South County water use since 1987-88 (when the District merged with Gavilan Water Conservation District) is shown in Figures 2-1 and 2-2. Metcalf Road is the dividing line between North County Zone W-2 and South County Zone W-5 (see map of Water Utility Zones in Appendix C).

Water use in North County, as shown in Figure 2-1, is predominantly M&I. Current projections indicate an increase in M&I use through 2020, when the total North County annual water use is projected to be 393,000 acre-feet. Agricultural water use is expected to be approximately 3,000 acre-feet per year through the year 2020 in North County. This is less than 1 percent of the total North County water use.

In South County, it is anticipated that M&I water use will continue to increase while agricultural use is expected to remain between 30,000 acre-feet and 35,000 acre-feet (see Figure 2-2). The latest projections for South County anticipate total water use of about 79,000 acre-feet per year by the year 2020. M&I and agricultural water uses are projected to be 44,000 acre-feet and 35,000 acre-feet per year, respectively.

The projected water usage for the County discussed above totals 486,000 acre-feet in 2020. This represents the likely outcome of many factors, including population trends, employment growth, water conservation practices, and plumbing code changes. Alternative circumstances could lead to total County water needs ranging from as low as 350,000 acre-feet to as high as 500,000 acre-feet in 2020. The lower end of this range is based on a projection of 1991 water use data, which reflects drought and recession-related behaviors. The higher end is based on predrought patterns of water use and a strong local economy.

The drought and economic downturn during the early 1990s drove a decrease in the County water use from 1987 to 1991. However, once drought conditions and the economic recession eased, the County began a general upward trend in water consumption from 1991 to 1997. Water use dropped in 1998 due in part to unusually wet weather early in the year, which helped reduce demand for water used in agriculture and landscaping.

Per-capita water use is increasing more slowly than total County-wide water use. This suggests that population growth and/or economic activity are driving the trend toward increased water consumption in the County. Per-capita water use was 188 gallons per day in 1998 and is estimated to be approximately 196 gallons per day in 1999.

LONG-TERM WATER SUPPLY OUTLOOK

The District's water supply includes water imported from the Sacramento-San Joaquin Delta, local water stored in reservoirs and groundwater subbasins, and recycled water. The Santa Clara groundwater subbasin is in the North County, while both the Coyote and Llagas groundwater subbasins are in South County (see Groundwater Subbasins and Major Recharge Systems Map in Appendix C).

Sources of water supply in North County consist of locally developed water and water imported via

the State Water Project, the Federal Central Valley Project (CVP) or San Felipe Division, and the City and County of San Francisco's Bay Division Pipelines (Hetch Hetchy). South County is supplied by locally developed water and CVP water imported via the San Felipe Division. The recorded water supply in North County since 1964-65 is shown in Figure 2-3, and South County since 1987-88 is shown in Figure 2-4.

In working toward ensuring a reliable future water supply, the District is engaged in several activities. Within the County, the District continues its conjunctive use program of recharging surface water to augment groundwater supplies. The District is providing financial contributions to wastewater agencies for delivery of recycled water for nonpotable uses. Future local supplies are projected to be augmented by nonpotable water from recycled water facilities in San Jose, Sunnyvale, and the South County Regional Wastewater Authority serving Gilroy and Morgan Hill.

The District, along with numerous other urban water agencies, is participating in the statewide Water Conservation Memorandum of Understanding to implement 16 urban water use best management practices (BMP). In addition, the District manages urban water use conservation programs beyond the BMPs and is implementing agriculture water conservation practices as required under the CVP Improvement Act. These activities are more fully described in Section III, Benefits and Services Provided by the District.

FIGURE 2-1
Santa Clara County Water Use
North Zone W-2

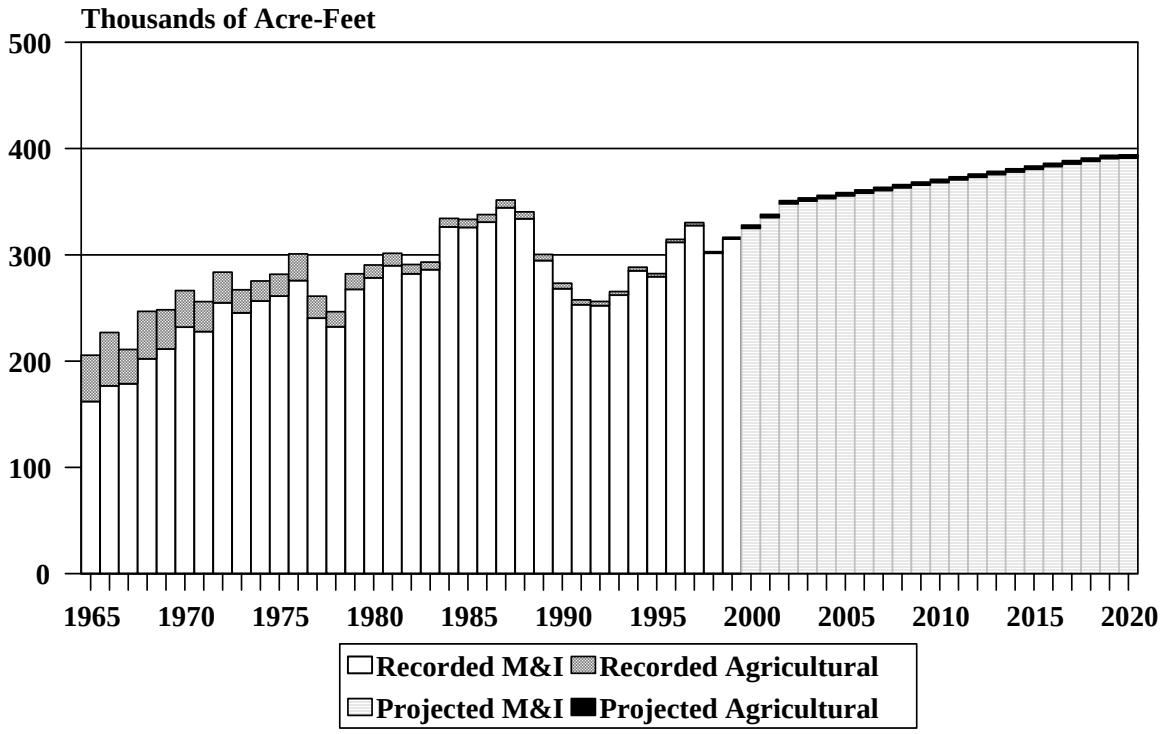


FIGURE 2-2
South Santa Clara County Water Use
South Zone W-5

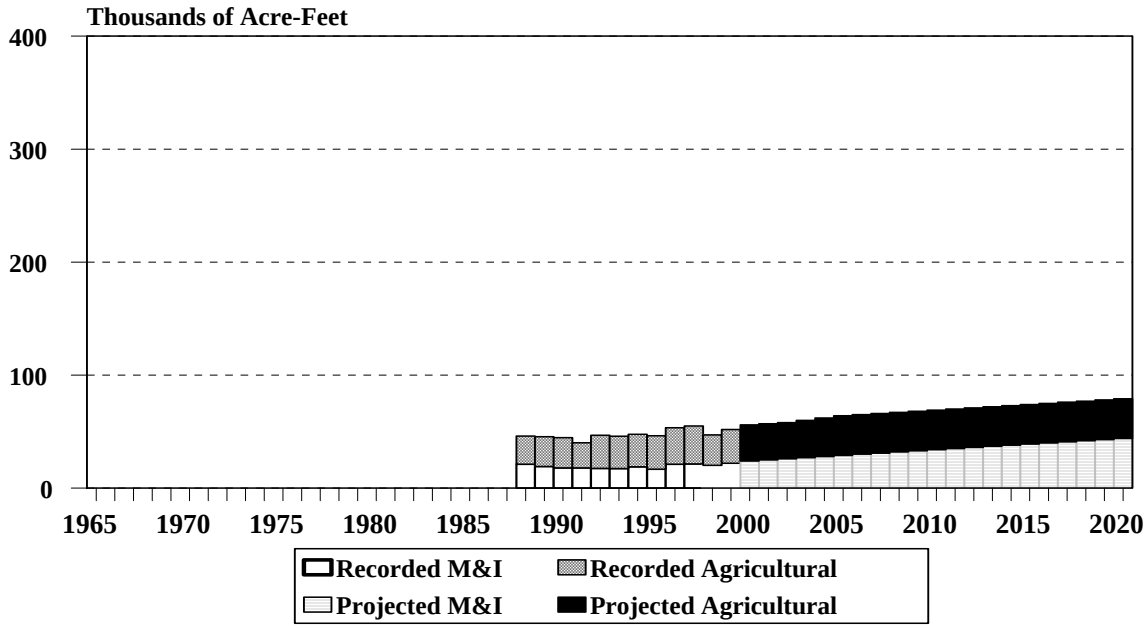


FIGURE 2-3
Santa Clara County Water Supply
North Zone W-2

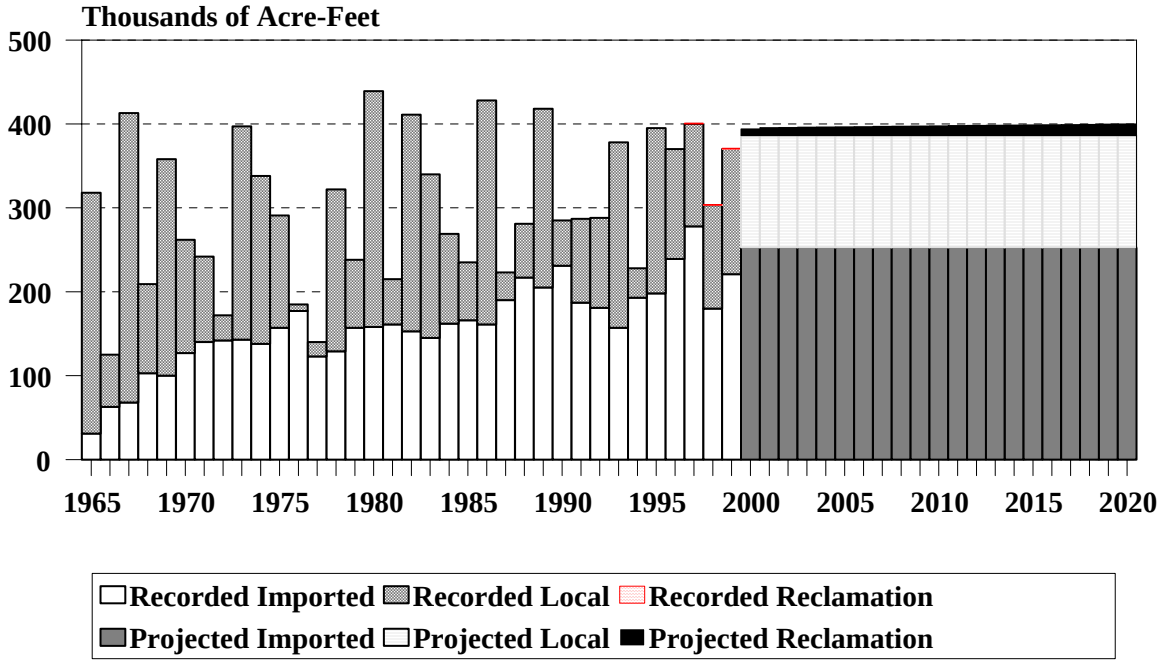
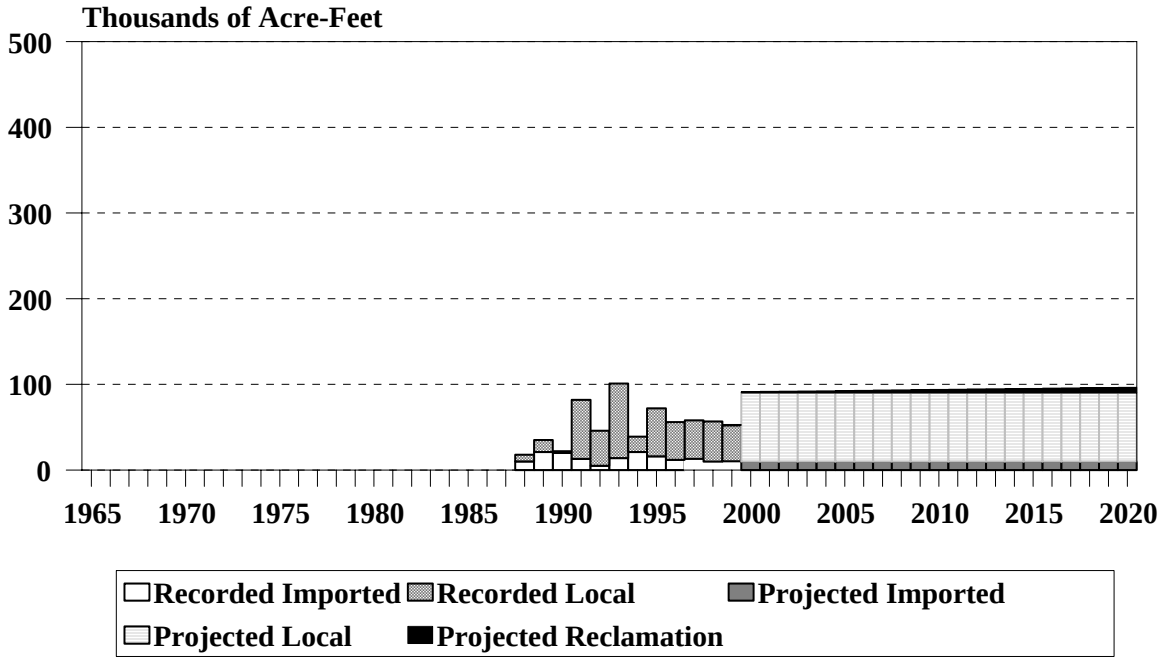


FIGURE 2-4
Santa Clara County Water Supply
South Zone W-5



The following tables show calendar year activities for 1998 and 1999 and the plan for calendar year 2000 reservoir operations, raw water conveyance, treated water production, and groundwater recharge. Table 2-1 summarizes water demands recorded and projected in the County for calendar years 1998, 1999 and 2000. Table 2-2 documents District and non-District annual water supply and distribution management activities, and Table 2-3 summarizes District out-of-county water banking activities for those 3 years. The differences between Tables 2-1 and 2-2 can be accounted for by changes in surface water and groundwater storage.

TABLE 2-1
Water Demands For Calendar Years 1998 Through 2000
Santa Clara County

Water Demand	Actual 1998	Actual 1999	Projected 2000
I. WATER PRODUCTION			
In-District Groundwater Pumping	146,100	161,900	160,300
District Treated Water	122,000	130,800	126,800
District Surface Water Irrigation	2,400	2,700	3,000
Non-District (Import and Local)	82,900	79,600	85,400
TOTAL WATER PRODUCTION	**353,400**	**375,000**	**375,500**
II. WATER USE			
District M&I	242,300	257,110	258,100
District Agricultural	28,200	29,924	32,000
Non-District (Import and Local)	82,900	87,966	85,400
TOTAL WATER USE	**353,400**	**375,000**	**375,500**

TABLE 2-2
Annual Water Supply and Distribution For Calendar Years 1998 Through 2000
Santa Clara County

Water Supply	Actual 1998	Actual 1999	Projected 2000
I. ANNUAL WATER SUPPLY			
District Supply			
Imported Water To County			
CVP Imports	78,680	117,200	79,900
State Water Project Imports	39,600	52,900	79,800
Total Water Imported To County	118,280	170,100	159,700
Local Surface Water	*107,910*	*83,100*	*94,000*
Non-District Supplies			
Hetch Hetchy	58,500	61,000	61,000
Other Reservoirs and Streams (San Jose/Stanford)	19,820	16,700	17,400
Recycled Water	700	1,900	7,000
TOTAL	**305,210**	**332,800**	**339,100**
II. DISTRIBUTION OF ANNUAL WATER SUPPLY			
Distribution Within District System			
To Treated Water	123,460	131,000	129,600
To Surface Water: Irrigation/Environment	9,930	14,800	11,100
To Managed Recharge			
Santa Clara Groundwater Subbasin	66,670	80,900	84,600
Coyote & Llagas Groundwater Subbasins	26,130	26,500	28,400
Subtotal of Distribution to District System	**226,190**	**253,200**	**253,700**
Non-District Distribution			
Hetch Hetchy	58,500	61,000	61,000
San Jose/Stanford	19,820	16,700	17,400
Recycled Water	700	1,900	7,000
Subtotal of Non-District Distribution	**79,020**	**79,600**	**85,400**
TOTAL	**305,210**	**332,800**	**339,100**

Recorded Operation for Calendar Year 1998

In 1998, the total water use in the County was 353,400 acre-feet. Following the wet El Niño winter, the water use was understandably lower than the previous year. Rainfall in the 1997-98 season totaled 25 inches in downtown San Jose, about 176 percent of average. Total water use included 242,300 acre-feet of M&I and 28,200 acre-feet of agricultural water. It also included 82,900 acre-feet used in the County by non-District contractors (Hetch Hetchy, Stanford/San Jose reservoirs, and recycled water deliveries). Of the District water used, 146,100 acre-feet were provided through groundwater pumping and 122,000 acre-feet were delivered from our three water treatment plants. In addition, 2,400 acre-feet were delivered from surface waters for direct use. Table 2-1 presents a detailed look at the in-county water demand.

To meet this demand, the District imported approximately 118,300 acre-feet of water from the State and Federal Water Projects, and released approximately 92,800 acre-feet from its reservoirs for groundwater recharge or treatment in one of our three treatment plants. The remainder of the District demand was met with local recharge or carryover storage from our groundwater basins. Table 2-2 shows the County's water supply and how it was distributed in 1998.

Recorded Operation for Calendar Year 1999

In 1999, the total water use in the County was 375,000 acre-feet. Rainfall in the 1998-99 season totaled 11.1 inches in downtown San Jose, about 78 percent of average. Total water use included 257,110 acre-feet of M&I and 29,924 acre-feet of agricultural water. It also included 88,000 acre-feet provided by non-District contractors (Hetch Hetchy, Stanford/San Jose reservoirs, and recycled water deliveries). Of the District water used, 161,900 acre-feet were provided through groundwater pumping and 130,800 acre-feet were delivered from our three water treatment plants. In addition, 2,700 acre-feet were delivered from surface waters for direct use. Table 2-1 presents a detailed look at the in-county water demand.

To meet this demand, the District imported approximately 170,100 acre-feet of water from the State and Federal Water Projects, and released approximately 83,100 acre-feet from its reservoirs for groundwater recharge or treatment in one of our three treatment plants. The remainder of the District demand was met with local recharge or carryover storage from our groundwater basins. Table 2-2 presents how the water supply was managed and distributed in 1999.

Projected Operation Plan for Calendar Year 2000

The objectives of the 2000 Operating Plan include efficient utilization of recharge facilities, providing treated water deliveries to meet demands and utilization of water supplies from alternate sources to minimize costs. The plan also balances other objectives such as flood protection, recreation, environmental stewardship, and public safety. The 2000 Operating Plan projects the District will use 94,000 acre-feet of locally-conserved water, and import 159,700 acre-feet, for a total of 253,700 acre-feet in 2000. It is projected that 113,000 acre-feet will be distributed to the District's groundwater recharge facilities. Treated water production is projected to total 129,600 acre-feet in 2000.

For the summer season, the District is well prepared to meet projected demands on District water of approximately 375,500 acre-feet for the coming year. On July 1, 2000, the ten District reservoirs had a combined storage of approximately 135,113 acre-feet, which is about 77 percent of capacity. Rainfall was 12.1 inches or 98 percent of average to date for the season, which ended June 30. In 2000, 90 percent of the State Water Project entitlement of 100,000 acre-feet ha been allocated to the District. The CVP has allocated 75 percent of the District's M&I and 65 percent of agricultural entitlements. The M&I entitlement is 130,000 acre-feet and the Agricultural entitlement is 22,500 acre-feet, for a total of 152,000 acre-feet.

The groundwater basin management strategy is to maximize in-county storage where the depths to water levels are below operational storage limits. To achieve this goal, the Board maintained the surcharge on treated water provided in excess of scheduled contract amounts at $0 per acre-foot at Rinconada Water Treatment Plant. This will continue to provide an incentive to use treated water in lieu of pumping from wells on the west side of the Santa Clara subbasin.

The District plans controlled releases of 94,000 acre-feet from District reservoirs in 2000. The 2000 operations plan includes delivery of 129,600 acre-feet of treated water, as well as 113,000 acre-feet to groundwater recharge and 11,000 acre-feet of surface water for irrigation and environmental needs. The remainder of the projected demand on District water will be met from natural recharge and carryover storage of the groundwater basins.

Table 2-2 provides details for the projected operations plan for 2000.

Banking and Reallocations

To provide reliability in future dry years, the District banks water in storage outside of the County. Primarily, the District banks State Water Project and Central Valley Project water at the Semitropic Water Storage District in Kern County. Another 1,400 acre-feet are stored at the San Justo Reservoir in San Benito County. In 1999, the District increased its total banked amount to approximately 122,000 acre-feet. We anticipate increasing our total out-of-county banked storage to 135,320 acre-feet by the end of 2000. Table 2-3 shows the distribution of banked water during calendar years 1998 through 2000.

To further increase reliability against future drought, in 1997 the District executed a Water Reallocation Agreement with the US Bureau of Reclamation and agricultural districts in the San Luis and Delta-Mendota Water Authority. Under this agreement, the District has reallocated 100,000 acre-feet of CVP water to the agricultural districts. In return, the District can use the Westlands and San Luis allocations to supplement its water supplies in years when CVP entitlements are less than 75 percent.

In recent years, the District has exchanged CVP allocations with San Benito County, in order to improve water management by taking advantage of a difference in each district's contract year. The District purchases water for San Benito in Summer months in return for San Benito returning a like amount, usually about 14,000 to 15,000 acre-feet, for the District in January and February. This agreement allows the District to "hedge" against the CVP allocating a reduced supply in the following contract year.

TABLE 2-3
District Water Banking For Calendar Years 1998 Through 2000

Water Banking	Actual 1998	Actual 1999	Projected 2000
SEMITROPIC WATER STORAGE DISTRICT (SWP WATER)			
Beginning Balance (January 1)	72,000	93,420	120,420
Change in Storage—Bank Deposit or Withdrawal	23,800	30,000	15,000
Transaction Losses	-2,380	-3,000	-1,500
Ending Balance (December 31)	**93,420**	**120,420**	**133,920**
SAN BENITO COUNTY—SAN JUSTO RESERVOIR (CVP WATER)			
Beginning Balance (January 1)	1,700	1,600	1,500
Change in Storage—Bank Deposit or Withdrawal	0	0	0
Transaction Losses	-100	-100	-100
Ending Balance (December 31)	**1,600**	**1,500**	**1,400**
TOTAL BANKED ENDING BALANCE (DECEMBER 31)	**95,020**	**121,920**	**135,320**

III. BENEFITS AND SERVICES PROVIDED BY THE DISTRICT

As a public agency, the District is concerned about providing a reliable, high-quality, long-term water supply to residents of this County. As a water supplier in California's increasingly competitive water market, the District strives to provide superior services as efficiently as possible. Protecting available resources and planning for and augmenting future supplies requires that the District levy charges on the production of groundwater and enter into financial contracts for the delivery of treated surface water.

This chapter describes the benefits and services that the District provides under the general heading of:

- Overall resource management
- Water Supply augmentation
- Water quality protection
- Capital improvements

OVERALL RESOURCE MANAGEMENT

Long-Term Planning for Water Supply

As the water management agency and major water wholesaler for Santa Clara County, the District is responsible for planning for the County's long-term water supply. The challenge facing the District is how to ensure a safe and reliable water supply for residents in a region that experiences periodic droughts and increasing competition for water supplies from other urban, agricultural and environmental water users throughout the state. In response to these complex issues the District Board endorsed a new planning approach in 1996, referred to as Integrated Water Resource Planning (IWRP), with the goal of meeting the water needs associated with future population and job growth through increased conservation, recycling, water transfers and groundwater banking. This mix of water resource options is designed to meet future water supply needs through the year 2020.

As conditions change, the IWRP provides a framework and a process for the continuing planning and development of the District's water supply program. This fiscal year (2001) the IWRP will be updated to include a number of ongoing planning processes and regulatory initiatives such as the CALFED Bay Delta Program, and implementation of the Central Valley Project Improvement Act and the Endangered Species Act (ESA), which may significantly affect the availability and reliability of imported water supplies. The update will also examine the local water supply outlook and account for changes in beneficial uses of stream flows for water supply and environmental purposes as a result of the ESA and the resolution of a water rights complaint filed against the District being addressed through the Fisheries and Aquatic Habitat Collaborative Effort.

The IWRP update will also provide a methodology for evaluating water supply investment choices that will include an economic analysis and risk assessment for water resource options, and a common basis for making comparisons between alternatives. This tool will assist the District in its evaluation of near-term opportunities linked to long-term investment decisions.

Business Planning

During 1999, the District developed its first formal Business Plan for the Water Utility. The purpose of the Business Plan is to define a business strategy framework that embraces the Board's strategic goals and objectives. The Business Plan assesses the District's position in the local, state and federal setting, as well as in California's statewide water marketplace. The identification of outcomes within the Business Plan communicates to Water Utility customers how District staff intends to achieve the outcomes identified in the Board's ends policies. Although we are a public agency, the District's Water Utility Business Plan recognizes the need to manage our functions using a businesslike approach and incorporate Ends Policies resulting from the Board's newly adopted Governance Policies. The Business Plan will be updated in advance of the next biennial budget to incorporate responses to the to the performance assessment conducted by the Board.

Stream and Watershed Management

As the water management agency in the County, the District plays a key role in balancing the water needs of a growing economy and those of the environment. The District has initiated a stream and watershed management approach as a responsible steward of watersheds and riparian corridors. For example, in the Fisheries and Aquatic Habitat Collaborative Effort the District, partnering with the California Department of Fish and Game, National Marine Fisheries Service, U. S. Fish and Wildlife Service, Natural Heritage Institute and the City of San Jose, studied the aquatic habitats in our managed streams and the impacts on them from District facilities and operations. The goal of this effort is to develop a plan that will balance water supply needs with habitat needs of fisheries and other aquatic species.

Stream maintenance projects are planned, designed, constructed, and operated in an environmentally sensitive manner to address reservoir water storage, in-stream and off-stream groundwater recharge, as well as water transfer between facilities while avoiding or minimizing impacts to the environment. Project specific measures are taken to protect sensitive species, water quality, fisheries, riparian and wetland resources. Examples include scheduling the work to avoid impacts to nesting birds and anadromous species, removing sediment from half of the channel in alternating years on certain creeks, diverting flows around a work site, reseeding disturbed areas, and relocating fish. Access to a project work site is planned to minimize impacts**.**

The Water Utility uses the County's waterways to transport water to recharge facilities and for recharge in the streambeds. In 1999, several projects were constructed to improve conditions for anadromous fish. The largest project, a fish ladder and fish screen at the Blossom Hill drop structure on the Guadalupe River, has been in operation since November 1999. By installing the Blossom Hill ladder and removing two barriers further upstream, the District has provided 19 miles of salmon and steelhead spawning habitat in the Guadalupe River. Work on additional fish ladders and screens for Masson Dam, Penitencia Creek, and Coyote Percolation Dam began in April 1999. Work on the fish ladder at Masson Dam on Guadalupe Creek was suspended during the winter season and resumed on summer 2000. Two fish ladders on Penitencia Creek, a fish ladder at the Coyote Percolation Dam and a fish screen at the Coyote Canal Diversion were also completed. A total of $4 million was appropriated in the 1998-99 budget for fish ladders, screens, and barrier removal.

Changes in land use and new developments can negatively impact water quality and District

facilities. To minimize these impacts, the District's Water Resource Protection Program enforces the District's Ordinance 83-2 which regulates activities near District facilities, reviews external environmental documents, and coordinates with other agencies with regard to their land use decisions.

Beyond 2000 Flood Protection and Stream Stewardship Program

To address the community expectations and the District Board's Ends Policies on quality of life in the County, the District is proposing additional funding to provide for restoration and enhancement of natural resources within our watersheds. This element is an important part of the proposed Clean, Safe Creeks and Natural Flood Protection Plan. This plan will address the use of existing District right of way and/or purchase of additional property for habitat protection, fishery habitat, open space and recreation.

The proposed Clean, Safe Creeks and Natural Flood Protection Plan also includes outcomes for protection of water quality in our creeks and bays. Under the program additional funding would ensure that our creeks are cleaner and free from trash. This element will also pursue improved detection and management of toxic materials (such as mercury and diazinon) and sediments that pollute our water supplies, creeks and bays.

Hydrologic Data Management

The District supports numerous data collection and analysis efforts covering rainfall, stream flows, reservoir storage, water use, and other information that is essential to planning and operating our water distribution and delivery system.

Government Relations

The District's Government Relations Unit coordinates timely communication and advocacy of the communities water-related interests with the State Legislature, U.S. Congress, state and federal regulatory agencies, and local governments. This unit increases recognition of the District at all legislative levels; builds legislative support for District programs and policies; and develops timely public policy analyses and responses to local issues affecting the District and its retail customers, as well as local business, community, and minority groups. This unit is instrumental in securing state and federal funding to augment local District funds.

Public Information and Education

Public information programs are designed to inform and educate residents about key water quality and water supply issues that affect the Water Utility's operations and planning. Such outreach programs are also critical to the success of the District's water conservation and resource protection programs, as they help ensure safe and reliable future supplies. The Public Information Office conducts public education and information campaigns on several main themes, including wise water use; water resource information; water recycling; clean, safe water; healthy creek ecosystems; and pollution prevention. To deliver this information most effectively, the office uses several media, from newsletters and brochures to the District's website (www.scvwd.dst.ca.us). Through its media relations function, the Public Information Office also keeps news media appraised of recent and breaking developments and activities. Finally, the office's schools program provides hands-on instruction and

curriculum materials for pre-kindergarten through college-level students and educators.

WATER SUPPLY AUGMENTATION

To maintain sufficient water supplies to support economic growth and maintain the quality of life in our community, the District is working on programs to ensure adequate water supplies in both the short and long term. Obtaining adequate supplies for the future has two aspects: maintaining the reliability of existing supplies through both wet and dry years and developing access to additional supplies to meet needs in future years.

To ensure the availability of 300,000 acre-feet annually to 15 cities spread over 1,300 square miles, the Water Utility operates the following facilities:

- ten surface reservoirs with a capacity of 169,000 acre-feet
- 17 miles of canals
- 393 acres of recharge ponds
- 142 miles of pipelines
- three water treatment plants
- three pump stations

To manage the County's water storage reservoirs, both surface and underground, the District operates and maintains a countywide conservation and distribution system (see Water Utility Facilities map, Appendix C.) Major facilities include the District's ten dams and reservoirs: Anderson, Almaden, Calero, Coyote, Chesbro, Lexington, Stevens Creek, Uvas, and Vasona; which conserve local runoff for either recharge into the groundwater basin or treatment at one of the District's three water treatment plants. The District also operates several local pipelines to transport imported raw water and locally-conserved water to various locations within the system for treatment and distribution or for groundwater recharge.

The District has long-term agreements to purchase water to augment local water supplies through the CVP and State Water Project facilities. In addition, the District supports the development of recycled water and promotes water conservation in homes, business, and agriculture. A significant effort is also dedicated to preparing long-range water supply plans, including planning for droughts. The principal activities of the District in augmenting water supplies are described below.

M**anaging Groundwater Recharge**

The District operates ten reservoirs that conserve water for later recharge into the groundwater subbasins. The Santa Clara Valley groundwater basin stores about one-half of the County's annual water supply for potable use. The basin is divided into three interconnected subbasins (see Groundwater Subbasins and Major Recharge Systems map, Appendix C). The District owns and operates more than 30 recharge facilities in six major recharge systems within these three subbasins. In addition to local water, these facilities also percolate imported water into the aquifer. The annual average recharge capacity of these systems is 157,200 acre-feet.

Although groundwater subbasins are also somewhat replenished by water that percolates through the beds of unmanaged streams, without the District's recharge facilities the majority of the natural stream runoff would flow out to the bay.

The Santa Clara subbasin underlies the northerly portion of the District and includes the majority of the streams and recharge facilities operated by the District. In 1999, the District replenished this subbasin with approximately 81,000 acre-feet of locally-conserved and imported water. The Coyote and Llagas subbasins in the southerly portion of the District were replenished with approximately 26,500 acre-feet of locally-conserved and imported water.

Surface Water Transportation and Storage

Water supply reliability includes both the availability of the water itself as well as the reliability and integrity of the infrastructure and systems that transport and store it. Thus, all activities related to operating and maintaining the District's dams, reservoirs, canals, and pipelines are directly related to providing water supply.

District facilities are subject to regulation regarding seismic performance of dams, reservoir landslide monitoring and evaluation, and periodic field inspections. Consequently, maintenance activities include continuing liaison and data exchange with the State Division of Safety of Dams and the Federal Energy Regulatory Commission relative to the safety of District dams.

Imported Water

The State Water Project, Federal Central Valley Project (CVP), and City and County of San Francisco's Hetch Hetchy Project provide approximately 60 percent of water supplies in average years to the County, delivering water from the northern California mountains and Sierra Nevada via the Sacramento/San Joaquin Delta and the Hetch Hetchy Aqueduct. Imported water is conveyed to the County through the South Bay Aqueduct, which carries water from the State Water Project; the Pacheco Conduit, which brings water from the CVP; and the Hetch Hetchy Aqueduct, which brings water from the Hetch Hetchy Reservoir in the Sierra Nevada Mountains.

Maintaining reliable access to high-quality supplies of imported water is essential to meeting current water needs and to implementing the District's IWRP strategy for future water supplies. Both Board and staff members are currently devoting considerable time in three areas related to securing reliable supplies of imported water: Resolution of Bay-Delta Issues through the CALFED process, Water Banking, and Managing CVP Contract Issues. Each of these is discussed below.

Resolution of Bay-Delta Issues: (CALFED Bay-Delta Program)

The future of our drinking water supplies depends on the health of an ecosystem that is miles away from this County: the San Francisco Bay/Sacramento-San Joaquin River Delta Estuary (Bay-Delta). The Bay-Delta is an intricate web of waterways at the junction of the San Francisco Bay and the Sacramento and San Joaquin rivers. It is home to the largest estuary on the west coasts of North and South America. The state and federal facilities that move water through the delta supply drinking water for more than 22 million Californians and provide a source of irrigation water for California's $24 billion farm industry.

The District imports water through the Delta under contracts with the State Water Project and the Federal CVP. However, decades of environmental neglect threaten the health of this fragile ecosystem, and have contributed to a decline in its water quality. Competing demands on a limited resource led to decades of conflicts and uncertainties in this imported supply. Furthermore, the vulnerability of delta levees to seismic and flooding failures threatens both the infrastructure and the

quality of California's water supply.

The District plays an active role in resolving these Bay-Delta issues, improving source water quality, and strengthening the agreements among state and federal agencies and various water users to increase overall reliability of supply. We do this by actively participating in the state/federal/public CALFED process and other related processes. Since the signing of the Bay-Delta Accord in December 1994, a coalition of state and federal agencies has worked to develop a long-term "fix" for problems in the Bay-Delta. The coalition, known as the CALFED Bay-Delta Program, has been developing a long-term plan for resolving Bay-Delta issues in cooperation with environmental, business, urban, and agricultural interests. The District is actively involved in the development and evaluation of this program because of the importance of the outcome on the reliability and quality of the District's imported water supplies.

After five years of planning, development and review, the CALFED Bay-Delta Program released a document titled: *California's Water Future: A Framework for Action* in June 2000. This "Framework" document outlines a specific set of actions to be implemented in the next seven years as part of the overall vision to create a balanced solution. In July 2000, CALFED released its Final Programmatic EIR/EIS (FPEIR/S). A Record of Decision and Notice of Determination are scheduled to be adopted by the end of August 2000.

Both the "Framework" and the FPEIR/S contain solution elements that would ultimately provide improvements to the District's water supply reliability and source water quality. Although many aspects of the Framework and FPEIR/S require further development and refinement, a successful Bay-Delta resolution is absolutely essential to address California's water problems and to maintain the public welfare and the economic viability of the state.

Banking Available Supplies for Future Use

The District's IWRP identified banking of excess supplies in wet years as a central element in the preferred strategy for providing supplies needed in future dry year.

In May 1996, the Board took the first step in implementing the banking strategy when it approved an agreement with Semitropic Water Storage District to store 45,000 acre-feet of State Water Project water. In 1997, the Board approved a long-term agreement with Semitropic. Under the terms of this agreement, the District has banked water in years 1997 through 2000. After accounting for physical system losses in Semitropic Water Storage District, the District now has over 130,000 acre feet in storage. (See Table 2-3)

Discussions with other water contractors to reallocate entitlements of imported water have resulted in agreements that will stabilize available imported supplies through wet and dry periods.

Managing Central Valley Project Contract Issues

The District's agreement with the Bureau of Reclamation requires eventual payment of a major share of their costs for constructing the San Felipe Division of the CVP. Under the 1977 contract, the District initially paid a reduced rate for its water deliveries, in recognition of the District's need to expand its local infrastructure costs to accept CVP water. At specified times, the per acre-foot costs were scheduled to increase, the increased amount going toward payment of our share of the federal CVP capital costs (the San Felipe Division facilities). During the deferred payback period, when per acre-foot rates were lower than the Bureau of Reclamation's actual costs, the Bureau of Reclamation

tracked the shortfall and calculated interest into the obligations owed by the District and other local participants. However, the Bureau of Reclamation and the District disagreed on a number of items related to their calculation of interest, as well as federal allocation of costs and funding related to the CVP.

While the exact repayment formulae remain under debate, the District continues to make limited payments under its 1977 contract toward the federal capital costs, but is setting aside funds to pay for its share of the San Felipe facilities in a reserve, the Bureau Repayment Appropriation. At the same time, the District is negotiating resolution of the issues that are blocking payment of the District's accumulated costs of the CVP.

By September 1996, a number of the financial issues had been resolved, and the Board approved payment of $20 million toward the District's accrued obligations to the CVP; one half of the payment was funded from the District's Bureau Repayment Appropriation.

In 1997, the District signed a binding agreement with the Bureau of Reclamation to renew its CVP contract pursuant to the provisions of the CVP Improvement Act, and at the same time reached agreement with the Bureau of Reclamation on another set of financial issues. If a renewed CVP contract is successfully negotiated, the District would be required to pay the actual cost of water service on an ongoing basis. The District is prepared to pay the actual cost for water service, to prevent further accrual of debt and interest payments to the Bureau of Reclamation as occurred under previous contractual payments that did not cover the Bureau of Reclamation's actual costs. The financial projections presented in Section IV of this report assume that future payments to the Bureau of Reclamation will fully cover the cost of service and prevent further debt increases and associated interest obligations for the District.

In 1998, the District initiated a project with other CVP M&I contractors to address the most significant and complex remaining financial issue, and resolution is expected in late 2000. This is approximately the same time frame in which the renewal of the CVP contract will be negotiated.

Water Recycling Partnerships and Assistance

Recycled water was identified in the IWRP as one element of the preferred strategy to increase water supply reliability. The District's current approach is to develop partnerships with the cities and publicly-owned treatment works that develop and/or distribute recycled water. Two major efforts are underway.

The first is to provide financial support for the distribution of nonpotable water. The District provides financial support under specified agreements to cities that develop recycled water. The District currently has agreements with the City of Sunnyvale and the South Bay Water Recycling Program. In 1997, the Board increased the District's financial support to suppliers of nonpotable recycled water from $93 per acre-foot to $115 per acre-foot.

The District is working with the city of San Jose on the South Bay Water Recycling Program, providing financial and technical support for program planning, design, construction, and inspection, and acting as a liaison with water retailers. Phase I—now complete at a cost of $140 million—consists of nearly 60 miles of transmission and distribution pipelines, pump stations, and reservoirs. Deliveries began in October 1997 and currently serve over 220 customers. Recycled water usage is expected to reach 7,000 acre-feet per year in 2000. Phase 2—now underway—will create short- and long-term master plans to increase recycled water distribution to 50,000 acre-feet per year by 2020.

In 1999, the District Board discussed goals of 5 percent recycled water use by 2010 and 10 percent by 2020.

The second of our major efforts is the recent completion of preliminary studies with the South County Regional Wastewater Authority. These studies confirm the feasibility to restore recycled water deliveries through an existing recycled water pipeline in Gilroy. The District plans to rehabilitate and operate the pipeline to deliver nonpotable water supplied by the South County Regional Wastewater Authority. This capital improvement project is estimated to cost approximately $6.1 million and is included in the projection of South County capital costs (see Table 3-1).

Other District activities include staff support to the Water Retailer's Recycling Subcommittee, the Agricultural Water Advisory Committee, and the Landscape Advisory Committee. Staff members also track technical and regulatory developments that affect the production and use of recycled water and participate in statewide recycling organizations and activities.

Water Conservation

The District's Water Conservation Program is essential to improving water supply reliability because water savings reduce current and future water demand. State and federally mandated conservation programs include implementing a set of Best Management Practices (BMPs) contained in the California Urban Water Conservation Council's Memorandum of Understanding regarding Urban Water Conservation, adopted by our Board in 1991. Implementation of these BMPs is required by the Central Valley Project Improvement Act. Key program elements include ultra-low-flush toilet rebates, low-flow showerhead distribution, promoting water efficient landscaping, and implementing commercial/industrial and agricultural water management programs. The Water Conservation Program's goal, as identified in our IWRP, is to reduce baseline water demands by a total of 46,000 acre-feet per year by the year 2020. The District's program provides financial, administrative, and technical assistance to both the water retailers and to residents and businesses within the County. As of July 2000, the District has accomplished the following:

- Ultra-low-flush toilets installed: 201,207
- Water efficient washing machine rebates issued: 13,124 (11 commercial washers)
- Low-flow showerheads distributed: 89,391
- Faucet aerators distributed: 17,584
- Large turf audits completed (Irrigation Technical Assistance Program): 405 sites
- Financial incentives paid to businesses for making water efficiency improvements: 22 sites, $209,310 resulting in 603 acre-feet per year in water savings
- Residential water audits completed: 2,554

The District is in the second year of the Mobile Lab Program, which provides in-county farmers with on-site irrigation system evaluations and recommendations for efficiency improvements. The District's Water Conservation and Nitrate Management Programs continue to work closely together to ensure that efficient water use and nitrate (fertilizer)

management is addressed by the Mobile Lab Program. The benefits of this program are twofold: by recommending ways to manage fertilizer and irrigation to more closely match actual crop needs, the potential for nitrate leaching into the groundwater can be reduced while maximizing water use efficiency. The recommendations are designed to maintain or improve agricultural productivity. To date, 44 sites represented by 34 farmers and growers have received the Mobile Lab field tests and twelve are scheduled for summer 2000. In addition, the District owns and operates two California Irrigation Management Information System (CIMIS) stations. CIMIS stations provide weather data that can be used to improve irrigation efficiency. The data is available to the public on our website, or by calling the CIMIS hotline at (408) 267-3127. The water conservation and nitrate management programs also have worked together to hold various workshops, field days, and seminars in the South County on irrigation, nutrient, and pesticide management.

Commercial/Industrial conservation programs begun in fiscal year 2000. Rebates are being offered on high-efficiency commercial washers and financial incentives are being provided for the efficient retrofit of industrial processes.

The District has operated its residential survey program since 1998 by hiring and training student interns as surveyors. This program is offered to all of the District's retailers, with the exception of San Jose Water Company, which has its own staff. This program instructs residents, property managers, and maintenance staff on how to read their meters, identify toilet leaks, and identify whether they have high flow showerheads and faucets. Showerheads and faucet aerators are installed upon request. The surveyor then evaluates the irrigation system and provides a lawn watering schedule along with other water conservation recommendations.

WATER QUALITY PROTECTION

In addition to augmenting water supply, the District is responsible for protecting surface and groundwater resources for use in the County. Water quality programs include: (1) treating local and imported surface water for sale to retailers and (2) protecting surface and groundwater resources from contamination. Water treatment is necessary to ensure that the water the District provides meets or exceeds all federal and state drinking water standards. Resource quality protection has numerous aspects that are discussed below. Specific information about our water quality programs are available on our website (www.scvwd.dst.ca.us). Monthly water quality test results are also posted.

Treated Water Operations

The District owns and operates three water treatment plants: Santa Teresa Water Treatment Plant, Rinconada Water Treatment Plant, and Penitencia Water Treatment Plant, which provide high-quality treated water to the residences and businesses in the County.

Reflective of its commitment to provide the highest quality water possible, the District was among the first water utilities nationwide to join the Partnership for Safe Water in 1995 (Partnership). The Partnership is a voluntary program developed cooperatively by the United States Environmental Protection Agency, the American Water Works Association, the Association of State Drinking Water Administrators, and several other national drinking water industry organizations. The purpose of the program is to further reduce the potential risks to consumers from microbial contaminants such as cryptosporidium and giardia. This is

accomplished by evaluating treatment plant facilities, processes, operating and maintenance procedures and management oversight practices, and then implementing appropriate improvement measures. Participation in this program has already yielded impressive results. The District has consistently surpassed the Partnership's goal for filtered water turbidity, a critical indicator of plant performance.

The District is proceeding with improvements to the purification processes at each of its three treatment plants, in response to two relatively new federal Safe Drinking Water Act (SDWA) amendments: the Enhanced Surface Water Treatment Rule and the Disinfectant/Disinfection By-Product Rule, announced in December 1998. The official compliance date for these amendments is December 2001, which allows time for necessary plant modifications. The planned changes in the process for water treatment will reduce the incidence of harmful by-products that can occur when surface waters containing organic materials are disinfected with chlorine.

Disinfection using oxidants such as liquid chlorine or chloramines is an important step in the purification of drinking water. The destruction of disease causing organisms by disinfection has been in widespread use since the early 1900s and has eliminated outbreaks of water-borne diseases such as cholera and typhoid in this country. Maintaining trace levels of chlorine or chloramine in drinking water after it leaves the treatment plant (called residual disinfection) provides the added benefit of preventing microbial growth in the pipelines throughout the distribution system. Disinfection by-products are compounds that can form when natural organic matter in water reacts with chemicals used for disinfection. Some disinfection by-products, such as trihalomethanes, are suspected to have long-term health effects, which is why the SDWA amendments were written.

Capital Improvements at the Water Treatment Plants

The District is currently upgrading all three of its drinking water treatment plants in two stages by installing improved methods of treatment to meet these new drinking water regulations. Stage 1 changes include modifications to the chlorine system, providing ferric chloride and potassium permanganate chemical feed systems, installing total organic carbon analyzers, and implementing other plant upgrades. Some of the Stage 1 strategies include delaying chlorination which reduces the formation of by-products by limiting the time that chlorine is in contact with organic materials and enhancing coagulation which improves the removal of organic materials before the chlorination process. Construction contracts have been signed and work is expected to be complete in 2001. The estimated cost for Stage 1 is $30 million.

Stage 2 of the planned work will further reduce the levels of disinfection by-products and potential for microbial contaminants in treated water. This allows us to further improve water quality and to meet more stringent regulations anticipated to be promulgated in 2000 and 2002. This will include switching to ozonation as the primary disinfection method instead of chlorination and installing filter washwater clarification facilities. The Stage 2 work also includes structural modifications to improve treatment plant reliability during seismic events and process additions to increase treatment capacity at Rinconada to meet projected future demands. The design is underway and the $130 million capital improvement project is scheduled for completion in 2004.

To complement these new treatment efforts, the District also is planning a new Water Quality

Laboratory (see Table 3-1 for construction schedule). The facility will replace the 30-year old Rinconada laboratory and will more reliably and cost-effectively monitor the quality of our water supplies.

An additional approach to managing residuals from treatment processes is to reduce the organic content of source water. The water imported by the District through the Delta has high levels of organic compounds from agricultural drainage and urban discharges. A major objective of the District's participation in CALFED is to improve the quality of water available as import from the Delta. The District will only endorse CALFED solutions that improve water quality in the Delta. A discussion of the District's participation in the CALFED process is presented elsewhere in this report.

Resource Protection

Preserving the quality of water supplies is more cost-effective than treating contaminated or degraded water. Pursuant to the District's mission to provide high-quality water to the County, the District continually addresses water quality problems that threaten the delivery of safe, reliable, high-quality water. This is to ensure that water delivered to the District's retailers meets or exceeds all state and federal drinking water regulations. This includes all existing regulations and provisions of the SDWA Amendments of 1996, the California SDWA, and any provisions of the District's treatment plants' operating permits from the California Department of Health Services. The District also responds to unforeseen water quality issues and acts to ensure the continued ability to deliver high-quality water.

The following subsections describe the District's activities to protect groundwater and surface water that are included in programs such as Water Quality and Reservoir Watershed Management, Groundwater Quality Management, Well Ordinance Program, the Underground Storage Tank Program, and Water Quality Special Studies. All these are directed at protecting the County's sources of water.

Methyl Tert-Butyl Ether

A continuing threat to the drinking water supply is the gasoline additive called methyl tert-butyl ether (MTBE). MTBE is a colorless chemical compound added to reformulated gasoline that was developed to reduce smog and meet the goals of the Clean Air Act. The State Air Resources Board mandated the year-round statewide use of reformulated gasoline in 1996. Since November 1996, the District, in partnership with the County's water retailers, has engaged in an aggressive monitoring program to track the occurrence of MTBE in the County's water supplies. In November 1997, the District confirmed the presence of small amounts of the chemical in water entering and leaving its three treatment plants. Traces of the additive have been found in a well owned by Great Oaks Water Company; this well was removed from service. Currently, MTBE is nondetectable in the local public water supply.

The human health effects of ingesting MTBE-contaminated water are not well known. However, the United States Environmental Protection Agency has labeled MTBE a "possible" human carcinogen and has issued a drinking water advisory of 20 to 40 ppb to protect public health and for taste and odor concerns. The California Department of Health Services' Office of Drinking Water has established a secondary

maximum contaminant level for MTBE of 5 ppb. Secondary standards are set for aesthetic qualities (taste and odor). In May 2000, the Department of Health Services' Office of Drinking Water implemented a primary maximum contamination level of MTBE of 13 ppb to protect public health.

The District is aggressively pursuing long-term solutions to this potential problem through a two-pronged approach: 1) a high level of effort is being expended to prevent more of the contaminant from entering public water supplies, and 2) expanding our legislative and outreach efforts (through our Government Relations and Public Information Offices) to restrict the use of MTBE as a gasoline additive. In late March 1999, the Governor of California ordered a phase-out of the additive in California gasolines.

The Board of Directors sent a letter to the Santa Clara County Board of Supervisors, recommending a countywide prohibition against the sale or distribution of gasoline containing MTBE or other ether oxygenates. In July 2000, the Board of Supervisors, rather than adopting the prohibition, sent a letter to Governor Davis supporting his efforts to phase out MTBE use in California.

Monitoring will continue at our reservoirs, treatment plants, and in all of the District's groundwater basins. The District has also conducted a pilot study to determine if MTBE releases are occurring at sites that comply with new standards for underground storage tanks. MTBE was detected in groundwater at 13 of the 28 sites that were studied.

The District is conducting a focused groundwater MTBE monitoring program. The program focuses on sampling shallow and deep wells in areas vulnerable to groundwater contamination, based on hydrogeology and the density of wells, underground storage tank sites and operating service stations. The District is completing the fourth round of sampling for this program in July 2000. Samples have been collected and analyzed from approximately 100 wells throughout the County. After four sampling rounds, no reportable concentrations of MTBE have been detected in any of the study wells The District will continue monitoring groundwater, but may reduce the sampling frequency and the number of wells in the program.

To protect local water supplies from MTBE, the District's Board again voted in March 1999 to reduce the number of powerboats (primarily personal watercraft) allowed on the three reservoirs that allow power boating to ensure that concentrations do not surpass our target of 3 parts per billion (ppb) in the reservoirs. In May 2000, the District and Santa Clara County Parks and Recreation Department began requiring the use of gasoline produced without MTBE in all watercraft on District-owned reservoirs.

Nitrate Management

A different threat to groundwater supplies is nitrate contamination. High nitrate

concentrations in drinking water can cause health problems in infants less than 6 months of age. Nitrate contamination is a particular concern in the southern portion of the County. The District has designed a Nitrate Management Program to reduce nitrate loading, to reduce nitrate exposure, and to monitor nitrate occurrence in the Llagas and Coyote groundwater subbasins of South County.

To reduce exposure to nitrate, the District offered a free nitrate analysis to all private water supply well users in the southern part of the county. Over 600 tests were conducted in 1998. More than half the wells tested exceeded the maximum contaminant level of 45 milligrams per liter of nitrate (mg/L NO_3). Test recipients were given a copy of the results along with a fact sheet detailing what nitrate is, where is comes from, what the health risks are, how to remove nitrate using point of use treatment systems and how to prevent further contamination. The fact sheet is also posted on the District's web page.

The District is currently working with the Department of Environmental Health on a Well Owner's Guide that will discuss proper well construction, maintenance, protection, and monitoring. When completed, the guide will be mailed to all well owners.

To reduce nitrate loading, the District has launched a public education program. The District has identified the main sources of nitrate in the South County area as fertilizer applications, septic systems, and animal enclosures. We are working with the University of California Cooperative Extension, Department of Agriculture, Farm Bureau and Natural Resource Conservation Service to produce several seminars/workshops on nutrient, irrigation and pesticide management. Over 250 people have attended the 8 seminars/workshops we have offered since July of 1998. The District offers free irrigation system evaluations to help local growers improve irrigation efficiency and free soil nitrate test kits to help local growers improve fertilizer management. The District is working with nearby counties, facing similar problems, to produce and distribute fact sheets on nitrogen and water management in agriculture. In addition, the District is a cooperator on a grant with a soil scientist to establish field trials demonstrating and evaluating the effectiveness of in-field nitrate testing in drip and sprinkler-irrigated vegetables. All of the agricultural information, including a calendar of events and links to other resources are posted on the District's web page.

The District plans to expand the outreach program to home gardeners/landscapers and livestock owners. A series of fact sheets are being produced in cooperation with the Loma Prieta Resource Conservation District and the University of California Cooperative Extension for the rural home owner. We hope to work with the County's new Natural Resource Advisor on an equine manure management workshop.

To monitor nitrate occurrence, the District has established a network of 53 wells throughout the South County study area. These wells are sampled on a quarterly basis to determine if there are any seasonal and/or areal trends. The District has installed 6 wells and plans to install several additional shallow groundwater wells (less than 100 feet) to assess variations in nitrate concentration with depth. Currently, 11 of the 53 wells are less than 100 feet deep. Network wells have been

monitored quarterly beginning in February of 1999. It is too early to assess any trends.

For all three action areas, the District has applied to the Groundwater Foundation for recognition as a Groundwater Guardian Affiliate. The Groundwater Foundation is a nationally recognized, private, non-profit, educational organization dedicated to protecting groundwater resources from contamination and over-drafting. One of the activities planned will be to encourage and support community volunteers who initiate outreach and monitoring on the local level.

Underground Storage Tank Fuel Cleanup Program

The District oversees the investigation, cleanup, and closure of cases where soil and/or groundwater have been affected by petroleum fuel and additives such as MTBE from leaking underground storage tanks.

Over 2,250 fuel leak cases have been reported in the County, and 69 percent of these cases have received regulatory closure from the State Water Resources Control Board, the San Francisco Bay or Central Coast Regional Water Quality Control Boards, or the District. The District is currently overseeing 594 tank sites in North County and 28 sites in South County. To date, 1,492 sites in North County and 63 sites in South County have been closed. The remaining open sites are overseen by the Regional Water Quality Control Boards, with the exception of six sites that receive oversight from the City of Gilroy.

The majority of the active cases are associated with releases of gasoline. MTBE has been detected at more than 392 of the active tank sites. MTBE has been detected at very low concentrations in at least one large public water supply well, one water well that supplies a local school district, and several private wells. The District conducts studies to understand the hydrology and the direction of the water flow in the aquifers. Based on these studies the district prioritizes those sites that pose the greatest risk to the groundwater basin and will take immediate action to correct the sites which have the greatest potential for contamination of the water wells.

Well Ordinance Program

The District protects the quality and quantity of the County's groundwater resources by ensuring that all wells in the County are constructed, maintained, modified, and destroyed in compliance with the District Well Ordinance and the State Water Code.

The Well Ordinance program includes permitting, tracking, inspecting, and violation enforcement of all wells in the County. The program also assists the public in destroying abandoned wells and maintains District-owned wells. During Fiscal Year 2000, the District:

- permitted 2,416 wells and other deep excavations for construction or destruction
- inspected 1,898 wells and other deep excavations constructed or destroyed
- registered 911 wells

- provided drilling services to the owners of 26 abandoned wells

Hazardous Materials Management

To prevent contamination of the County's water supply from hazardous materials, the District manages the investigation, analysis, removal, and disposal of suspected or known hazardous materials dumped or spilled in the vicinity of source areas such as reservoirs, recharge ponds, and creeks.

Urban Runoff Program

The District has dedicated efforts to improve the quality of storm water runoff as a member of the Santa Clara Valley Urban Runoff Program. Efforts such as this improve the quality of storm water that flows into streams in Santa Clara Valley. The District participates in this program as 1 of 15 copermittees under a single Clean Water Act permit from the Regional Water Quality Control Board. Combining efforts with other local agencies for this permit has greatly improved the performance and efficiency of this program. For instance, the permit renewal fee is $10,000 per year. Combining 15 agencies under one permit saves $140,000 per year and requires that only one set of annual reports be prepared and submitted to the Regional Water Quality Control Board, rather than 15.

CAPITAL IMPROVEMENTS

Capital improvement projects in progress include the expansion and upgrade of the Raw Water Control System, the repair of the landslide on the Santa Clara Tunnel, the Stage I Water Treatment Plant upgrades. The Stage II Water Treatment Plant upgrades are currently being designed; construction is scheduled to begin during the 2001 fiscal year and end approximately during fiscal year 2003. Table 3-1 shows the funding for capital projects for 2000-01 and the next 4 fiscal years. The cumulative investment between 1990-00 and 2004-05 is projected total over $200 million.

TABLE 3-1

Capital Improvement Projects - Fiscal Year 1999-00 through 2004-05

($ Millions of Constant 2000 Dollars)

Water Utility Capital Improvement Projects $ Millions	99/00 Adjusted Budget	00/01 Adopted Budget	01/02 Projection	02/03 Projection	03/04 Projection	04/05 Projection
SOURCE OF SUPPLY						
South County Recycled Water Improvements	0.9	4.4				
Santa Clara Tunnel Landslide	0.6	0.1				
Lenihan Dam Outlet Modifications	0.3	0.2	0.7	5.7	0.6	
Future Facility Rehabilitation Needs	-	0.3			2.0	3.0
Other Source of Supply Capital Improvements	0.8	0.4	0.3	1.0	7.9	7.7
RAW WATER TRANSMISSION & DISTRIBUTION						
Raw Water Maintenance Wetlands Mitigation	-					
Raw Water Control System	1.2	0.7				
Guadalupe River Fish Ladder Modifications	0.2	0.0				
Coyote Canal Diversion Fish Screen	0.1	0.0				
Coyote Canal Extension Abandonment	-	0.2				0.2
Coyote Percolation Dam Fish Ladder	0.1	0.0				
Masson Dam Fish Ladder/Screen	0.2	0.0				
Almaden Calero Canal	0.1	2.7	0.3			
Future Facility Rehabilitation Needs	-	-				
Other Raw Water T&D Capital Improvements	0.9	1.1		0.0		
WATER TREATMENT						
Water Quality Regulation Compliance Project	-		0.7	0.2	0.1	0.1
Water Treatment Improvement Project Stage 1	26.2	2.4	0.6		-	
Water Treatment Improvement Project Stage 2	1.0	44.3	59.6	1.7	1.7	0.2
Modular Plants	2.1	0.1			-	
Penitencia WTP Control Center Upgrade	0.2	0.4				
Penitencia WTP Clearwell Modifications	0.4	0.0			-	
Penitencia WTP Landscape & Erosion Control	0.1	0.0			-	
New Water Quality Laboratory	1.5	6.4	0.5		-	
Future Rehabilitation Needs	-	0.3				
Other Water Treatment Capital Improvement	1.0	0.9			-	
TREATED WATER TRANSMISSION & DISTRIBUTION						
SCVWD SFWD Intertie	2.8	0.1	0.0			
Milpitas Pipeline Relocation	0.3	0.1				
Rinconada Reservoir Roof Rehabilitation	0.2	0.9				
Future Faciltity Rehabilitation Needs	-	-				
Other Treated Water T&D Capital Improvement	0.2	0.1				0.4
ADMINISTRATION & GENERAL						
Automated Mapping/GIS	-	-	-	-	-	-
Total Water Utility Capital Improvements	**41.5**	**65.9**	**62.8**	**8.6**	**12.3**	**11.6**

IV. FINANCIAL OUTLOOK FOR THEWATER UTILITY ENTERPRISE

INTRODUCTION

The purpose of this section is to describe the short-term and long-term financial requirements for achieving the Board's ends policies and to present a funding approach. Section I reported the adopted rates for 2000-01. Section IV describes the multiyear financial analysis and the funding approach that serves as the foundation for the adopted rates in each zone. It also presents projected water rates in each zone for the next 10 years. Appendix B describes the Water Utility revenue sources, cost centers, and reserves as well as Board policy regarding finances.

Between 1988 and 1993, a statewide drought limited water supplies and required extensive conservation, leading to more efficient use of available supplies. In the three worst years of the drought, the Water Utility saw its volume of water sales decline by over 20 percent relative to deliveries in 1987-88. To maintain revenues over this period, the M&I rate increased 160 percent for the North County and 400 percent for the South County. When the rains returned in 1993, the Board lowered rates by roughly 10 percent for the fiscal year starting July 1, 1993.

Water rates remained essentially unchanged for 5 years until fiscal year 1998-99 when the M&I rate in North County was raised from $240 per acre-foot to $260 per acre-foot. This increase was the first in a series of rate increases that will be needed to meet the projected expenses of the Water Utility.

As described in Section III, the future contains many challenges that require additional funds for both capital and operating outlays. Projections of the capital and operating costs indicate that wholesale water rates will need to increase in the next several years, as the utility invests over $208 million in capital improvements from 2000 to 2005.

There are two major contributing factors to the long-term need for revenues:

X Quality and safety of water delivered from the District's three water treatment plants
X Costs of imported water from the Federal CVP

The financial projections shown in this section incorporate the estimated costs to address these factors. The financial outlook does not include any estimates of the costs for two additional challenges that could also impose significant future financial demands on Water Utility customers:

X Costs to implement proposed solutions to the Bay-Delta water quality problems.
X Costs of potential water supply capital investments to implement the IWRP, such as future recycled water facilities in the North County.

These items are in the conceptual planning stages and include a wide range of potential program costs and facility investments (see Section III).

REVIEW OF DISTRICT'S FINANCES FOR 1998-99, 1999-00, 2000-01

Table 4-1 shows the revenue requirements that are the basis for the adopted rates, breaking out operations, water purchases, extraordinary items, and capital. The net requirements are the revenues that must be available from water sales, property taxes, and other sources after using revenue bond proceeds and allowing for funds added to, or used from reserves.

The District's financial plans are designed to carry out the direction of the Board's Ends Policy 1.1, "There is a reliable supply of healthy, clean drinking water." Some of the major increases in the 2000-01 budget reflect the higher cost to maintain or upgrade the District's aging facilities to enable better operations under increasingly stringent public health and environmental requirements. Table 4-1 shows the revenue requirements for operations and other activities for 1998-99, 1999-00 and 2000-01.

The cost of water purchased from the federal and state projects continues to be a major budgetary item, requiring approximately $20 million per year. The annual cost of CVP water is expected to increase after the District's contract is renewed in late 2000. Any budgeted funds that are not paid out to the CVP for water purchases are set aside in a reserve, while negotiations are underway with the Bureau of Reclamation to settle on the amount of the District's obligation.

Extraordinary outlays occurred in 1998-99 totaling $15.2 million for the following:

X $5.6 million for banking water with Semitropic Water Storage District
X $3.4 million for expanded efforts in water conservation program
X $4.6 million for emergency repairs at Lenihan Dam
X $0.85 million for cost sharing the work planned with South County Recycled Water Authority
X $0.75 million for planning studies in conjunction with South Bay Water Recycling

No extraordinary items were identified for 1999-00, but, significant operating outlays totaling $6.1 million were made in the following continuing programs:

~~X~~ $5.0 million for expanded efforts in Water Conservation Program
X $0.6 million for Fisheries and Aquatic Habitat Collaborative Effort.
X $0.5 million for efforts to combat the threat of MTBE contamination of the groundwater basin

Design and construction of capital improvements mainly directed at enhancing the safety of drinking water delivered from the District's three water treatment plants are underway. In 1999-00 Stage I improvements were under construction at a total cost of approximately $27 million. In addition, a Stage II design contract of $14.3 million has been awarded. In 2000-01 the total Water Utility capital appropriation is $65.9 million, $54.7 million of which is for the water treatment plants. In 2000-01, $44.3 million is appropriated for Stage II improvements alone.

Reserves provide a balancing mechanism to smooth fluctuations in the level of revenue that must be raised from water sales in a single year. Appendix B gives a description of each of the Water Utility Reserve Funds. In 1998-99, a net reduction of $25.5 million in reserves occurred as a result of the following:

X A decrease of $10.9 million in Supplemental Water Supply Fund to cover extraordinary expenses for water banking, conservation and recycling
X A decrease of $27.1 million from Capital Reserves to pay for capital improvements.
X An increase of $0.3 million to the operating reserves.
X In increase of $12.2 million to the Bureau Repayment appropriation.

To solve the challenge of water supply and quality issues, the District will use both reserves and revenue bonds to support a smooth, gradual increase in water rates to meet fund revenue requirements occasioned by capital improvements totaling $207 million between 2000-2005.

For the year 1999-00, the Water Utility is using reserves and current funds to meet capital needs. Also, the district is planning to temporarily use $7.5 million of reserves from the Supplemental Water Supply Appropriation in order to postpone the need to issue revenue bonds until the Fall of 2000. After the proceeds from the bond issuance are received, $7.5 million will be used to restore the Supplemental Water Supply Appropriation to its present level of $8,625,000.

TABLE 4-1
Overview of Water Utility Revenue Requirements
($ Millions)

Revenue Requirements	Actuals 1998-99	Estimated 1999-00	Adopted 2000-01
Operations	53.5	65.5	65.3
Water Purchases			
Federal Water	13.2	9.2	9.2
State Water	9.6	11.0	11.0
Extraordinary Items	15.2	0.0	60.5
Capital Projects	33.0	41.5	65.9
TOTAL REQUIREMENTS	**124.5**	**127.2**	**212.0**
Add/Subtract Changes in Reserves	(25.5)	(14.2)	(51.6)
Less Revenue Bond Proceeds	0.0	0.0	(54.5)
Less Projected Carryover	0.0	(5.0)	0.0
Net Requirements From Water Utility Revenues	**99.0**	**108.0**	**105.9**

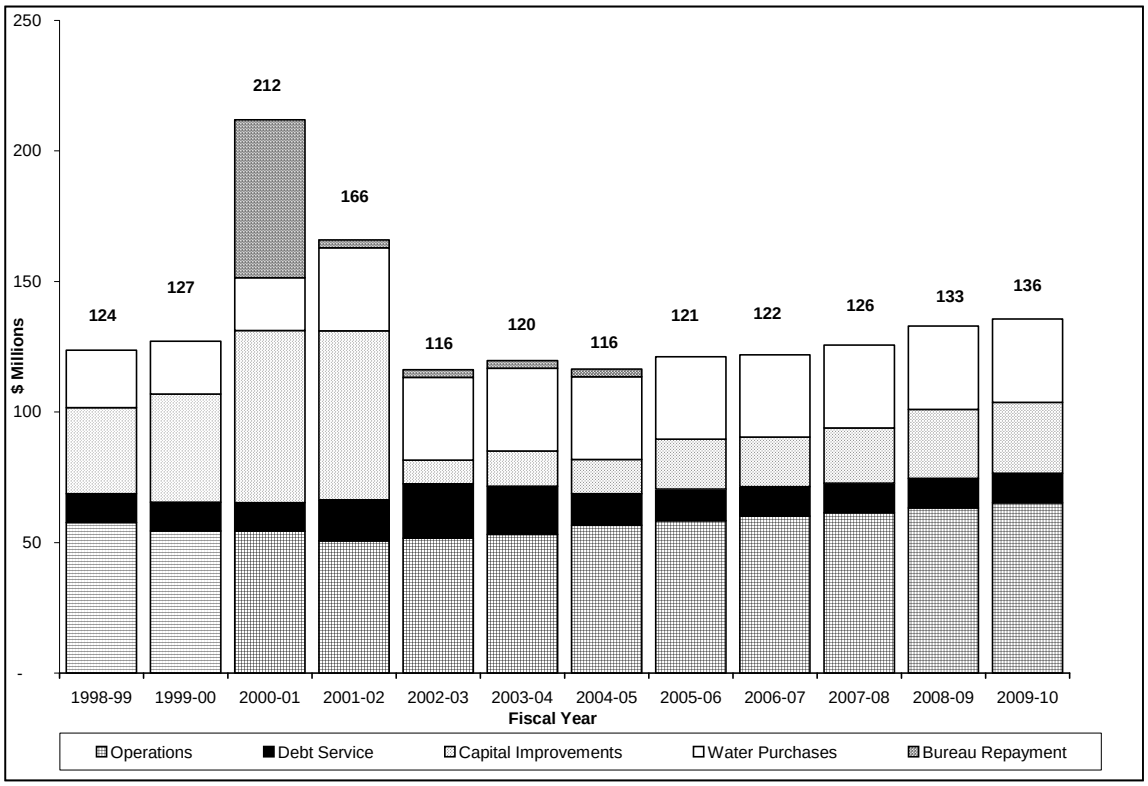
For the year 2000-01 Table 4-1 shows total requirements of $212 million. This need will be met from a combination of current revenues, reserves, and long-term debt. The adopted rates shown in Table 1-1 are projected to produce approximately $87.2 million in revenues from water usage. Property taxes are projected to be $13.2 million, after $9.25 million is reprogrammed for watershed management. The District will need to issue revenue bonds to fund its capital program. Preliminary financial analysis indicates that bond proceeds of $54.5 million would, when combined with revenue from current operations, be sufficient to fund capital appropriations and to restore reserves for future capital and the Supplemental Water Supply Appropriation. The Financial Advisor to the District will provide a specific financing plan to the Board in the Fall of 2000.

Table 4-1 also shows an extraordinary payment of $60.5 million planned for fiscal year 2000-01. This is for the anticipated payment of the District's accumulated costs of water from the San Felipe Division of the CVP. Since 1989-90, the Water Enterprise has reserved moneys in the Bureau Repayment Appropriation for this purpose. The financial modeling summarized in Table 4-1 anticipates that the entire balance of the appropriation, $60.5 million, would be paid out in 2000-01. The table shows a net decrease in reserves of $51.6 million because of plans to restore capital and operating reserves that were drawn down in 1999-00.

OVERVIEW OF LONG-TERM CAPITAL AND OPERATING PLANS

To develop a rate structure that will support planned work, staff analyzes the immediate needs of the District as well as anticipated requirements in the years to come. The projected outlays for the next 10 years (see Figure 4-1) include capital and operating costs for the water quality and water supply issues discussed in Section III. The initial stages of the capital investment needed to comply with mandated water quality regulations are underway at the three water treatment plants and contribute to the large expenditure indicated in 2000-01 and 2001-02.

FIGURE 4-1
Ten-Year Program—Projected Expenditure



In addition to the capital improvements, the plan to pay to the Bureau of Reclamation the District's share of the San Felipe Division of the CVP will contribute to the magnitude of projected outlays for 2000-01 and several more years, as the Bureau of Reclamation finalizes its accounting for water delivered in 1999 and 2000.

As the Stage 1 and Stage 2 treatment plant modifications are completed, annual operation expenditures are projected to increase significantly. In 2004-05 water treatment costs are projected to be $22 million compared to $11 million in 2000-01. In general, other operating costs are expected to rise with inflation, barring unforeseen factors that may place new requirements on the utility.

LONG-TERM FUNDING APPROACH FOR THE WATER UTILITY

To provide for the financial requirements projected for the next 10 years requires a financial plan that combines current revenues (from water sales), revenue bond sales, reserves, and other sources to satisfy total expenses each year. The immediate challenge is to provide $207 million for capital facilities and equipment between fiscal years 2000 and 2005. Capital reserves are expected to be only $1.2 million at the end of 1999-00 and, therefore, should be replenished to guard against unanticipated needs. Table 4-2 below shows the funding sources for capital projects from year 2000 through 2005.

Table 4-2
Capital Improvement Projects Funding Sources –Fiscal Year 1999-00 through 2004-05
($Millions)

Current utility revenues are about $105.9 million annually, of which, revenues from water sales are nearing $86.5 million. Relying on revenue from water sales to fund capital needs would require raising and lowering rates as capital needs fluctuate.

Alternative approaches to meet the future financial needs of the Water Utility were investigated and presented to the District's Board and the public during public hearings in 1998 and subsequent years. Revenue Bonds were agreed to be a prudent financing mechanism to provide capital improvement funds and to avoid large fluctuations in water rates. Figure 4-2 shows the water rates projections that in combination with bond financing will finance needs to 2010. Over a 7-year period, rates are projected to increase from $240 per acre-foot in fiscal year 1998 to $360 per acre-foot in 2005, an average increase of 7 percent per year.

A preliminary financing strategy that relies on revenue bonds for meeting capital needs and provides capital reserves to moderate year-to-year increases in water rates is included in the ten-year plan shown in Table 4-3. Table 4-3 shows the projected revenues, expenditures, and reserves over the next 10 years based on proceeds from revenue bonds of $54.5 million dollars in 2000-01 and $63.6 million in 2001-02. Using revenue bond financing means that the District will see debt service rise from $11 million in 1999-00 to $20.8 million in 2002-03, assuming the treatment plant improvements continue on a schedule that leads to completion in 2004. Even with the dedication of tax revenues to watershed management, updated projections show additional bond financing would not be needed to fund the capital program anticipated in 2003-04 and beyond.

During 1998-99 and 1999-00, the utility used available reserves to postpone issuing revenue bonds. Staff began work on a plan of finance in Spring 2000 and anticipates issuing by December. The District's Financial Advisor will discuss alternative debt financing plans with the Board of Directors in the Fall of 2000.

FIGURE 4-2
Ten-Year Rate Projection

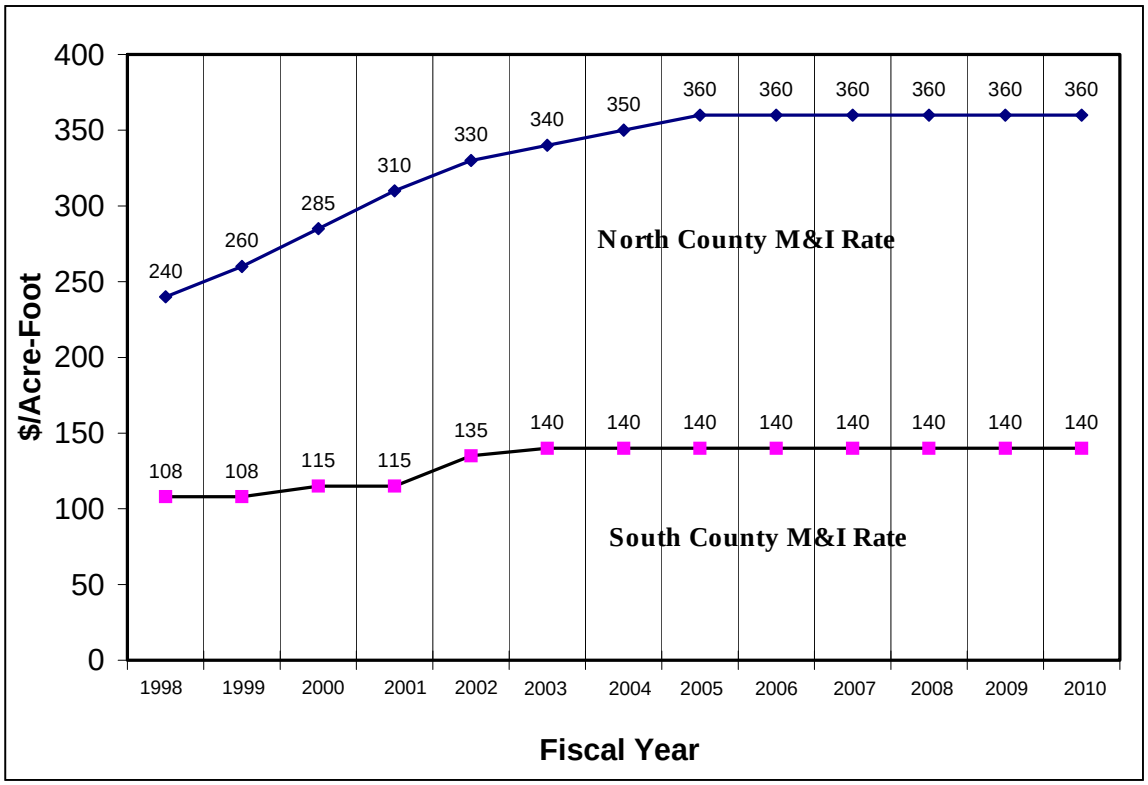

400
350
300
250
200
150
100
50
0
$/Acre-Foot
240
260
285
310
330
340
350
360
360
360
360
360
360
North County M&I Rate
108
108
115
115
135
140
140
140
140
140
140
140
140
South County M&I Rate
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
Fiscal Year

TABLE 4-3
Ten-Year Water Utility Plan
($ in Thousands)

	Actual 1998-99	Adjusted Budget 1999-00	Adopted Budget 2000-01	Projected 2001-02	Projected 2002-03	Projected 2003-04	Projected 2004-05	Projected 2005-06	Projected 2006-07	Projected 2007-08	Projected 2008-09	Projected 2009-2010
Revenue Sources:												
Groundwater Charges	$28,779	$37,100	**$38,600**	$42,466	$44,525	$46,568	$48,650	$49,150	$49,510	$50,010	$50,510	$50,510
Surface/reclaimed Water Sales	$247	$182	$196	$207	$212	$217	$223	$223	$223	$223	$223	$223
Treated Water Charges	$41,015	$41,475	**$47,720**	$50,500	$52,550	$56,010	$60,600	$61,480	$62,310	$63,240	$63,680	$64,560
Inter-governmental services	$2,402	$700	$700	$344	$351	$358	$366	$374	$382	$391	$400	$409
Total Operating Revenue	$72,442	**$79,457**	**$87,216**	$93,517	$97,638	$103,153	$109,839	$111,227	$112,425	$113,864	$114,813	$115,702
Non-Operating Income:												
Property Taxes	$19,436	$21,569	**$13,209**	$13,788	$13,162	$13,245	$13,339	$13,455	$12,727	$12,816	$12,910	$12,910
Interest	$6,766	$6,499	$5,188	$1,433	$1,659	$1,552	$1,931	$2,339	$2,671	$2,950	$3,150	$3,044
Capital Contributions	$171	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Other	$210	$426	$251	$165	$165	$165	$165	$165	$165	$165	$165	$165
Total Non-Operating Income	$26,584	$28,494	$18,647	$15,386	$14,986	$14,962	$15,435	$15,959	$15,563	$15,931	$16,225	$16,119
Total Revenue	**$99,026**	**$107,951**	**$105,863**	**$108,903**	**$112,624**	**$118,115**	**$125,274**	**$127,186**	**$127,988**	**$129,795**	**$131,038**	**$131,821**
Operating Outlays:												
Operations	$77,304	$69,445	$71,577	$80,521	$81,801	$83,302	$87,118	$88,631	$90,379	$92,345	$94,299	$96,220
Operating Projects	$3,346	$5,226	$3,032	$1,975	$1,574	$1,501	$1,214	$1,250	$1,287	$886	$912	$939
Debt Service	$10,864	$10,992	$10,896	$15,777	$20,768	$18,415	$12,091	$12,123	$11,307	$11,306	$11,306	$11,306
Total Operating Outlays	**$91,514**	**$85,663**	**$85,505**	**$98,273**	**$104,143**	**$103,218**	**$100,423**	**$102,004**	**$102,973**	**$104,537**	**$106,517**	**$108,465**
Excess (Deficit) Revenues vs Operating Outlays	$7,512	$22,288	$20,358	$10,630	$8,481	$14,897	$24,851	$25,182	$25,015	$25,258	$24,521	$23,356
Unreserved balance beginning of year	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Balance Available for Capital and Reserves	**$7,512**	**$22,288**	**$20,358**	**$10,630**	**$8,481**	**$14,897**	**$24,851**	**$25,182**	**$25,015**	**$25,258**	**$24,521**	**$23,356**
Total Capital Appropriations	**$32,970**	**$41,488**	**$65,947**	**$64,658**	**$9,095**	**$13,502**	**$13,037**	**$19,134**	**$18,997**	**$21,124**	**$26,405**	**$27,197**
Other Financing Sources/ (Uses):												
Revenue Bond Proceeds/Grants	$1	$0	$54,516	$63,603	$0	$6,592	$0	$0	$0	$0	$0	$0
Payment to Central Valley Project	$0	$0	($60,506)	($3,000)	($3,000)	($3,000)	($3,000)	$0	$0	$0	$0	$0
Total Other Financing Sources/ (Uses)	**$1**	**$0**	**(5,990)**	**60,603**	**(3,000)**	**3,592**	**(3,000)**	**$0**	**$0**	**$0**	**$0**	**$0**
Budget Balance Available	**(25,456)**	**(19,200)**	**(51,579)**	**6,575**	**(3,614)**	**4,987**	**8,814**	**6,048**	**6,018**	**4,134**	**(1,884)**	**(3,841)**
Projected Carryover		5,000										
Balance Avaliable	**(25,456)**	**(14,200)**	**(51,579)**	**6,575**	**(3,614)**	**4,987**	**8,814**	**6,048**	**6,018**	**4,134**	**(1,884)**	**(3,841)**
Appropriated to/(from) Reserves:												
Operating Reserves:												
Contingency Appropriation	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000
Working Capital Appropriation	$7,832	$7,069	$7,125	$8,006	$8,554	$8,477	$8,243	$8,372	$8,521	$8,651	$8,816	$8,978
Supplemental Water Supply Appropo.	$8,625	$1,125	$8,625	$8,625	$8,625	$8,625	$8,625	$8,625	$8,625	$8,625	$8,625	$8,625
Rate Stablization Reserve Fund	$1,000	$1,000	$1,500	$2,000	$3,000	$4,000	$4,000	$4,000	$4,000	$4,000	$4,000	$4,000
San Felipe Appropriation	$2,443	$2,443	$2,443	$2,443	$2,443	$2,443	$2,443	$2,443	$2,443	$2,443	$2,443	$2,443
Total Operating Reserves	**$20,900**	**$12,637**	**$20,693**	**$22,074**	**$23,622**	**$24,545**	**$24,311**	**$24,440**	**$24,589**	**$24,719**	**$24,884**	**$25,046**
Capital Reserves:												
Replacement Appropriation	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Designated for Future Years' Capital	$7,152	$1,215	$2,086	$7,280	$2,117	$6,182	$15,229	$21,148	$27,018	$31,021	$28,973	$24,970
Construction Reserves	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Capital Reserves	**$7,152**	**$1,215**	**$2,086**	**$7,280**	**$2,117**	**$6,182**	**$15,229**	**$21,148**	**$27,018**	**$31,021**	**$28,973**	**$24,970**
Reserves for Contingent Liabilities:												
Bureau Repayment Appropriation	$60,506	$60,506	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Reserves for Contingent Liabilities	**$60,506**	**$60,506**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
Total Appropriated to /(from) Reserves	**$88,558**	**$74,358**	**$22,779**	**$29,354**	**$25,739**	**$30,727**	**$39,540**	**$45,588**	**$51,607**	**$55,740**	**$53,857**	**$50,016**

NORTH COUNTY (ZONE W-2) FINANCES

Water Charge Zone W-2, North County, accounts for approximately 80 percent of District water sales, but because of higher water rates, over 95 percent of the Water Utility's revenue. After holding the rates constant for 5 years, the Board, after discussions with the water retailers and other advisory groups in May 1998, embarked on a plan to raise the groundwater charge for North County gradually to meet the anticipated higher financial requirements. Continuing to the approach agreed to with its advisory groups, the Board in May 2000. adopted a groundwater charge of $310 per acre-foot for nonagricultural (M&I) water and $28.50 per acre-foot for agricultural water for fiscal year 2000-01. The adopted groundwater charges in Table 1-1 for 2000-01 continue along the projection made in 1998.

The issuance of revenue bonds for 2000-01 is projected to increase North County funds by approximately 51 percent from estimated revenue in 1999-00 as shown in Table 4-4. Fiscal year 2000-01 appropriation show a 70 percent increase due to the capital investments in the District's three water treatment plants and CVP repayment.

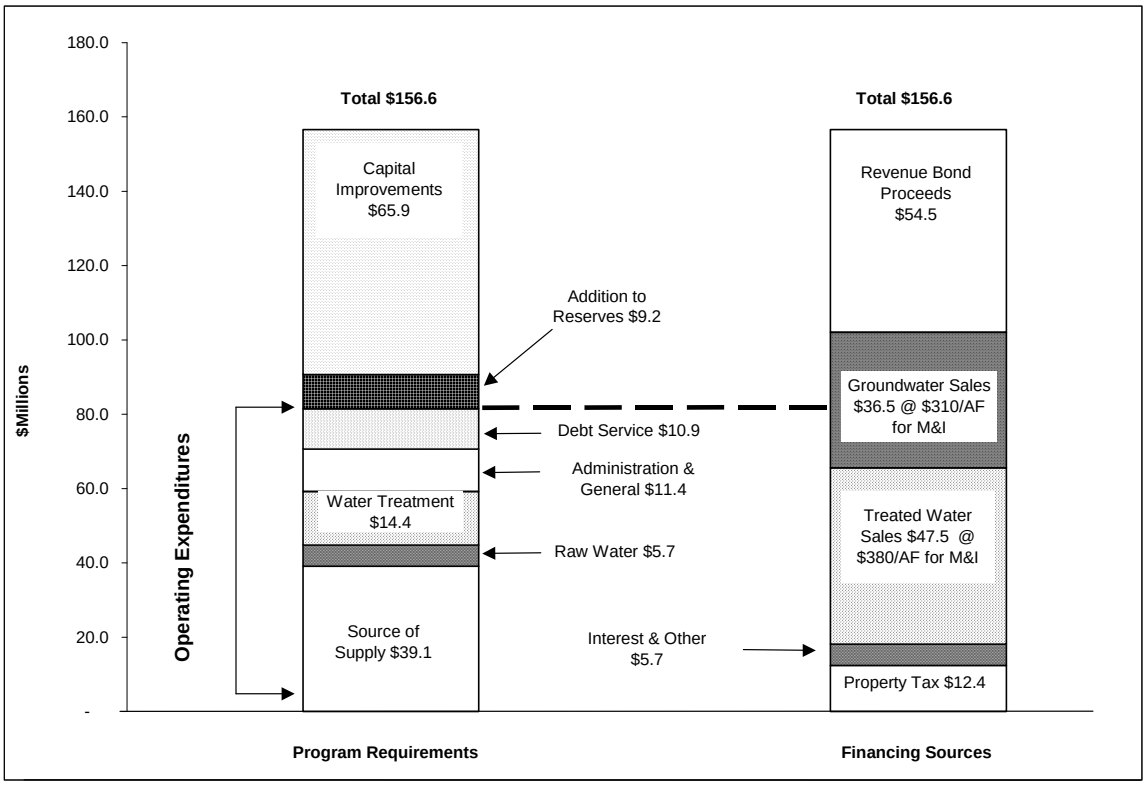
TABLE 4-4
Overview of North County Finances
($ Millions)

	Actual 1998-99	Estimated 1999-00	Adopted Budget 2000-01
Allocated Revenue	94.99	103.67	101.97
Revenue Bonds	0.00	0.00	54.52
Less Open Space Credit to South Agriculture	(0.43)	(0.49)	(0.47)
Capital Amortization From South County	0.56	0.56	0.56
Allocated Costs			
Operations	65.84	65.09	62.39
Imported Water	21.34	16.00	19.02
Capital Improvements	32.97	41.49	65.95
CVP Repayment	0.00	0.00	60.51
Total Cost	**120.15**	**122.58**	**207.86**
North County Surplus (Deficit)	(25.03)	(18.83)	(51.29)

The groundwater charges adopted by the Board for fiscal year 2000-01 are necessary to conduct "district activities in the protection and augmentation of the water supplies for users within a zone or zones of the district which are necessary for the public health, welfare, and safety of the people of this state" (District Act, Section 26.3).

Figure 4-3 shows the relationship between expenditures and the projected sources of revenue in Zone W-2. The revenues from the groundwater rates are necessary to carry out the full scope of activities needed to provide healthy, potable water supply in this zone.

FIGURE 4-3
Fiscal Year 2000-01
North County Water Utility Program Requirements and Financing Sources
($Millions)



SOUTH COUNTY (ZONE W-5) FINANCES

Rates in the South County (Water Charge Zone W-5) are based on the costs of specific facilities, imported water costs, and operations costs related to managing the groundwater basin, ensuring water quality, and measuring water supplies and usage. Under current policies for managing the finances of South County, water rates are set to maintain an approximate balance between revenues and costs. The cumulative balance is tracked, and projected water charges are set to keep the cumulative balance near zero, while maintaining relative stability in South County water rates. Successive years of surplus or deficit can occur, but rates are adjusted only when the trend in the cumulative surplus or deficit shows a significant imbalance.

Current Board policy adds an "open space" credit to agricultural revenues. The purpose of the credit is to preserve the open space benefits provided by agricultural lands by keeping agricultural rates low. The credit to agricultural water users in a water charge zone amounts to the difference in revenue from agricultural water use charged at a rate equivalent to 10 percent of the zone's M&I rate and that which would be generated if the agricultural rate were 25 percent of the zone's M&I rate. A Board policy setting the agricultural water charge at one-tenth of the zone's M&I rate was instituted in July 1998 and formally incorporated into the pricing policy in Resolution No. 99-21 (see Appendix B). As shown in Table 4-5, the Open Space Credit received by the South County was $430,000 in 1998-99, estimated at $490,000 in 1999-00, and projected to be $470,000 in 2000-01.

As the M&I rates for both zones are projected to grow in the next 6 years, so will the amount of the Open Space Credit available to support agricultural water revenues.

With the rates adopted for fiscal year 2000-01, the South County deficit is estimated to be approximately $0.29 million (see Table 4-5). This would result in a cumulative deficit of $0.23 million at the end of 2000-01. The rate projection shown in Figure 4-2 is expected to result in annual deficits through 2007-08 and to return to a cumulative surplus in 2010-11.

The quantity of imported water used in South County is expected to average approximately 9,000 acre-feet; however, Table 4-5 shows the costs of imported water are expected to be lower in 1999-00 and 2000-01, compared to costs shown for 1998-99. This occurs because recent accounting of CVP costs received from the Bureau of Reclamation shows a smaller shortfall in the District's payments. Consequently, projections prepared for 1999-00 and 2000-01 have eliminated additions to the Bureau Repayment Appropriation, resulting in lower costs to South County for the time being.

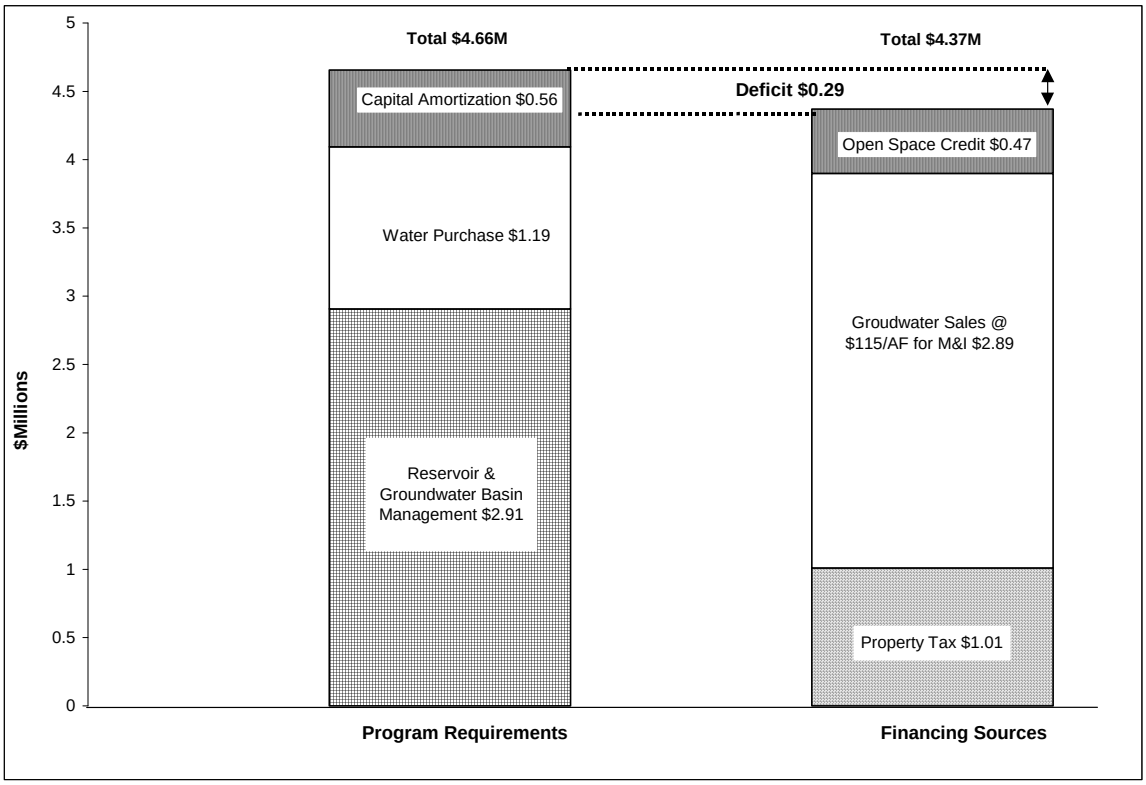
The projected costs in South County are complicated by uncertainty in the future use of imported water in the San Pedro Recharge Ponds. Recent successive wet years have led to high groundwater levels, which are causing problems for some property owners in South County. The District is analyzing approaches to monitoring the movement of groundwater and is expanding its monitoring network to better understand the underground aquifers in the South County. The solution to this problem may require additional, as yet undetermined capital investments to insulate nearby property from recharge operations.

TABLE 4-5
Overview of South County Finances
($ Millions)

	Actual 1998-99	Adjusted 1999-00	Adopted Budget 2000-01
Allocated Revenue	$4.03	$4.28	$3.89
Received Open Space Credit From North County	$0.43	$0.49	$0.47
Allocated Costs			
Operation	$2.75	$3.39	$2.91
Imported Water	$1.58	$1.18	$1.19
Amortized Capital Improvements	$0.56	$0.56	$0.56
Total Cost	**$4.90**	**$5.13**	**$4.66**
South County Surplus (Deficit)	($0.44)	($0.36)	($0.29)
Cumulative Balance	$0.43	$0.07	($0.23)

Figure 4-4 shows the relationship between expenditures and projected sources of revenue in South County (Zone W-5). The revenues from the groundwater rates are necessary to carry out the full scope of activities needed to provide healthy, potable water supply in this zone. In addition to the tasks directly related to conveying and recharging water for South County customers, the Water Enterprise also conducts programs to protect water quality in both surface and groundwater resources. Additional programs educate both agricultural and domestic customers about water conservation methods and provide direct assistance with water audits and implementation of water-saving technology.

FIGURE 4-4
Fiscal Year 2000-01
South County Water Utility Program Requirements and Financing Sources
($Millions)



APPENDIX A

WATER UTILITY RATE COMPONENTS AND ADOPTED RATES

TABLE A-1
Adopted Water Rate Components for Fiscal Year 2000-01

Component	Rate (AF)
Basic User, Zone W-2	
Agricultural	$31.00
M&I	310.00
Basic User, Zone W-5	
Agricultural	11.50
M&I	115.00
Treated Water Surcharge	
Contract	70.00
Noncontract*	0.00
Water Master	11.75
Capital Cost	
Half Road Lateral System	$2.75

*Note: Noncontract water was available only from the Rinconada Water Treatment Plant in 1999-00, and this is the recommendation for 2000-01.

TABLE A-2
Adopted Water Charges for Fiscal Year 2000-01

Type of Charge	AG Water (AF)	M&I Water (AF)
Groundwater		
Zone W-2	$31.00	$310.00
Zone W-5	11.50	115.00
Surface Water[1]		
Evergreen Deliveries[2]	228.00	N/A
Half Road Deliveries[3]	26.00	129.50
Other Zone W-5 Deliveries[4]	23.25	126.75
Other Zone W-2 Deliveries[5]	42.75	321.75
Minimum Charge Zone W-5[6]	86.25	86.25
Minimum Charge Zone W-2[7]	232.50	232.50
Stored Water		
Zone W-2	31.00	310.00
Zone W-5	11.50	115.00
Treated Water[8]		
Contract	N/A	380.00
Noncontract	N/A	310.00
Recycled Water		
Gilroy	$20.00	$80.00

[1]Surface water charge is the sum of the basic user charge plus the water master charge. It also includes the capital cost and power, wherever applicable.

[2]Evergreen agricultural delivery charges for 1992 through 2000 equal the 1988-89 rate ($72.00/AF) plus 50 percent of the City of San Jose's wheeling charge ($156/AF). The District no longer delivers M&I water to the Evergreen Area.

[3]Half Road = Basic User (AG or M&I @ $11.50 or $115.00) + Water Master ($11.75) + Capital ($2.75).

[4]Other Zone W-5 Deliveries = Basic User (AG or M&I @ $11.50 or $115.00) + Water Master ($11.75).

[5]Other Zone W-2 Deliveries = Basic User (AG or M&I @ $31.00 or $310.00) + Water Master ($11.75).

[6]Minimum Charge W-5 = 0.75 X Basic User W-5 (M&I @ $115.00).

[7]Minimum Charge W-2 = 0.75 X Basic User W-2 (M&I @ $310.00).

[8]Treated Water Charge is the sum of Basic User ($310.00) and Treated Water Surcharge ($70.00/AF).

APPENDIX B

DESCRIPTION OF WATER UTILITY REVENUE SOURCES, COST CENTERS, AND RESERVES

PRICING POLICY

The District's Board adopted Resolution No. 99-21 updating the Water Utility taxing and pricing policy in March 1999. This pricing policy incorporates four concepts: (1) water pooling, (2) water facilities cost pooling, (3) water resources management, and (4) revenue pooling. The complete policy follows after page B-4. The principal update to the policy in March 1999 was the Board's setting the agricultural water rate at 10 percent of the M&I rate in both Zones W-2 and W-5. Resolution No. 99-21 is included in this appendix.

WATER CHARGES

X Water charges include a **groundwater charge**, which is equivalent to the **basic user charge**, and is associated with the benefit of groundwater supplies. The groundwater charge is tax applied to water extracted from the groundwater basin in Zones W-2 and W-5, as shown in Appendix C. The basic user charge is applied to other types of water delivered by the District. There are two rates: one for agricultural water and one for M&I water.

X A **treated water surcharge**, which is associated with the benefit of receiving treated water, is levied in addition to the basic user charge on water delivered from the District's water treatment plants.

PROPERTY TAXES

Ad valorem taxes provide revenue to support several benefits which are general in nature serving all or large areas of the County. Some of these benefits are the availability of imported water to the County, recreation associated with the District's reservoirs, and replenishment of the County's groundwater subbasins.

The District receives a portion of the 1 percent countywide tax revenues as allocated by the County Assessor. Tax Zones W-3 and W-4, as well as a countywide ad valorem tax, are part of the 1 percent allocation. In 1992-93, 10 percent of the Water Utility's portion of the 1 percent allocation was reallocated as part of the 1992-93 state budget. It is possible that the Water Utility will be impacted by further state reallocation of the 1 percent ad valorem tax in the future.

The District also levies additional ad valorem taxes under Article XIII A of the State Constitution to meet: (a) prior approved general obligation bond debt service in Zone W-1 (zones are shown on the map in Appendix C) and (b) part of the contractual obligations for State Water Project State of California water with a countywide tax.

DEBT FINANCING

To fund the construction of new facilities, the District has relied on both pay-as-you-go financing and long-term debt financing from revenue bonds as authorized by the voters in 1977. The last remaining 1977 authorized revenue bonds were sold in April 1984. In January 1984, State

Legislation allowed the District to seek authorization to issue revenue bonds as needed following the Board's approval. County voters approved this authorization in November 1984. The District sold an additional $30 million of revenue bonds in November 1985 to provide needed funding for ongoing projects. In August 1986, the District refunded all outstanding water revenue bonds. Again, in June 1994, the District took advantage of favorable market conditions to refund the remaining 1986 water revenue bonds. The 1994 refunding totaled $65.9 million at an effective interest rate of 5.2 percent.

WATER UTILITY RESERVES

1. **Designated for Future Years Capital**: This reserve accounts for the remainder of current available funds (or deficit) and is appropriated in support of future capital needs as projected in the District's 5-Year Capital Improvement Plan.

1. **Contingency Appropriations**: Set at a fixed recommended amount at the beginning of the fiscal year to provide for unforeseen needs and emergency appropriations during the year.

1. **Replacement Appropriations**: Established at recommended levels for the immediate or emergency replacement of water enterprise fixed assets. The prior years appropriated amounts were set at approximately 2 percent of the book value of the Water Enterprise Plant and Equipment. Beginning in fiscal year 1998-99, the 5-Year Capital Improvement Plan has identified needed fixed asset replacements and has eliminated the need for this reserve. The balance of any prior years appropriation have been combined with the appropriation Designated for Future Year Capital.

1. **Working Capital Reserves**: This reserve establishes available cash assets from which operating and capital expenditures are made prior to the receipt of revenues for the fiscal year. The level of the reserve is established based upon the source and timing of the expected receipt of revenues. In the Water Utility, the level of reserve is set at 1/12 of budgeted operating outlays (required under Water Revenue Bond Resolution 94-58).

1. **San Felipe Appropriation**: This is a contractually stipulated operating reserve pursuant to the District's contract with the Bureau of Reclamation for the operation and maintenance of the San Felipe Division Facilities.

1. **Bureau of Reclamation Repayment Appropriation**: Established by Board policy to provide funding for the District's future contractual liability to the Bureau of Reclamation, CVP.

1. **Supplemental Water Supply Appropriation**: This reserve is established under Board policy to provide funding for supplemental water purchase during period of drought or participation in water banking or conservation opportunities.

1. **Rate Stabilization Reserve Fund**: Established pursuant to the District's Water Revenue Bond Covenants under Resolution 94-58. Amounts accumulated in this reserve may be used to supplement District revenues to meet Debt Service Coverage Requirements during periods of extraordinary operating expense in lieu of a rate increase.

In addition to the foregoing balances held by the District, a debt service reserve fund is held by the District's fiscal agent to meet any deficiencies that may occur in meeting the revenue bond debt service. The amount on deposit is equal to 10 percent of the proceeds from the 1994 refunding or $6,591,500.

WATER UTILITY ZONES

The major sources of water revenue are from charges levied on all groundwater extracted within Zone W-2 and Zone W-5 of the District and from the sale of approximately 110,000 acre-feet of treated water. Other water charges are made for surface water diversions and sales of recycled water in the Gilroy area. A brief description of each water zone (see Water Utility Zones map in Appendix C) within the Water Utility Enterprise follows:

Zone W-1: Encompasses the groundwater basin in the northern County and small peripheral areas outside the groundwater basin, with the retail service areas of privately-owned public utilities and municipal water departments using water pumped from the groundwater basin. This area provides the security for general obligation bonds. Zone W-1 comprises an area of approximately 290 square miles and includes all or portions of 13 of the County's 15 cities, plus some unincorporated territory.

Zone W-2: Encompasses the Santa Clara Valley groundwater basin north of Metcalf Road. It includes those groundwater producing facilities that benefit from recharge of the basin with local and imported water. A charge is levied for all groundwater extracted from this zone.

Zone W-3: Encompasses the Coyote and Llagas groundwater basins in the area from Metcalf Road in the north to just south of the City of Morgan Hill. Part of the County property tax within the 1 percent limit is allocated to this zone.

Zone W-4: Contains all of Zone W-2 and lands outside Zone W-2 that use or otherwise benefit from locally conserved water and from the importation and distribution of water from the South Bay Aqueduct. This area also receives an allocation of County taxes. These tax revenues are used to pay for the cost of water, recovery of accumulated overdrafts, control of land surface subsidence, and to sustain the emergency supply of water.

Zone W-5: Is comprised of the entire groundwater basin from Metcalf Road south to the Pajaro River. Charges are levied for all groundwater extracted from this zone.

Zone W-6: Represents the old Gavilan Water Conservation District and is within Zone W-5.

WATER UTILITY COST CENTERS

Source of Supply Cost Center contains all the anticipated expenditures that relate to obtaining, producing, and protecting a water supply and includes all District conservation, recycling, and importation costs.

Raw Water Transmission and Distribution Cost Center contains all expenditures relating to the distribution of raw water. The distribution system consists of pipelines, canals, and percolation ponds and includes the use of creek systems.

Water Treatment Cost Center contains all expenditures associated with the treatment of water at the Rinconada Water Treatment Plant, Penitencia Water Treatment Plant, and Santa Teresa Water Treatment Plant.

Treated Water Transmission and Distribution Cost Center contains all expenditures relating to the distribution of treated water to water utilities and includes costs associated with the treated water reservoirs, pumping plants, pipelines, and turnouts.

Administration and General Cost Center contains all expenditures of an administrative nature, which are not assigned to one of the other four cost centers. Work performed in this cost center covers items such as the collection of groundwater charges, financial and cash flow studies, annual reports, and general water quality management and resource planning.

Resolution 99-21

APPENDIX C

MAPS

Water Utility Facilities

Water Utility Zones

Groundwater Subbasins and Major Recharge Systems